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**Cox**, Hon. Ed. King, Esq., M.L.C., Mulgoa, Penrith.
**Cobham**, J. B. Esq., St. Leonard's, North Shore.
**Clark**, John K, Esq., Melville, Liverpool Plains.

NORTON, JAMES, Esq , Ecclesbourne, Double Bay; 59 Elizabeth-street.

ONSLOW, Captain, ARTHUR A. W., Esq., R.N., Camden Park.
OSBORNE, JAMES, Esq , Wollongong.
OGILVIE, Hon. ED. D., M.L.C., Esq., Yulgilbar, Grafton.
OSBORNE, GEORGE, Esq., Foxlow, via Bungandore

PHELPS, J. J., Esq., Melbourne Club.
PALMER, WILLIAM HALL, Esq., M.D., Hunter's Hill.
PRENDERGAST, R , Esq., Sydney.

RAMSAY, E. P.. Esq., C.M.Z.S., Museum.
ROBERTS, A., Esq., 45 Phillip-street.
ROBERTSON, Hon. JNO., Esq., M.L.A., Clovelly, Watson's Bay; Reform Club.
ROBERTSON, THOS , Esq., Oakville, Randwick.
ROWLING, CHARLES, Esq , Mudgee.
READ, R. B., Esq., Randwick.

STEPHENS, W. J., Esq., M.A., New School, Darlinghurst.
STACKHOUSE, Com. T., R.N., Australian Club.
SANDEMAN, ALFRED, Esq., Seven Oaks, Upper William-street North, Darlinghurst; 132 Pitt-street.
STRONG, W. E., Esq , M.D., Surgeon Superintendent, Government Asylum, Liverpool.
SALAMONS, J. E., Esq., 123 Elizabeth-street.

TOOTH, ROBERT, Esq., Yengarie, Maryborough, Queensland.
TUCKER, G. A., Esq., M.D., Cook's River.
TARRANT, Dr., Kiama.

VOSS, HOULTON HARRIS, Esq., Union Club; 189 Macquarie-street.

WARD, W D., Esq., M.A., St. Leonard's.
WILKINSON, C. S., Esq , Armidale.
WALKER, R. C., Esq., Public Library.
WILSON, WM , Esq., Monaltrie, Richmond River.
WHITE, Hon. JAS., Esq , Martindale, Denman; Cranbourne, Double Bay.
WOLFEN, William, Esq., 23 Bridge-street.
WATERHOUSE, F. G., Esq., South Australia.
WRIGHT, H. G. A , M.R.C.S.E., Wynyard-square,

YOUNG, W. J., Esq., Australian Club.

# RULES.

◆

I. The Linnean Society of New South Wales, is instituted for the cultivation and study of the Science of Natural History, in all its branches.

II. The Society shall consist of Ordinary, Corresponding, and Honorary Members. Gentlemen not resident in New South Wales, who shall have contributed valuable information or specimens to the Society, shall be eligible for appointment as Corresponding Members, at the discretion of the Council. Honorary Membership shall be conferred only on distinguished Naturalists not resident in New South Wales.

III. The Officers of the Society shall consist of a President, Vice-President, Secretary, and Treasurer.

IV. The affairs of the Society shall be conducted by a Council, consisting of six Members (in addition to the office-bearers), to be elected each year, at the Annual General Meeting.

V. The President, Vice-President, Secretary, and Treasurer, shall be elected in like manner, at the Annual General Meeting.

VI. It shall be the duty of the Secretary to keep a list of all Members, and a record of all correspondences, transactions, and proceedings of the Society.

VII. The Treasurer's duty shall be to receive all payments made to the Society, and disburse all sums payable by the Society out of the funds in his hands. He shall furnish the Society annually, with an account of all such receipts and disbursements. He shall demand all arrears of annual subscription, after such shall have been due three months. No payments shall be made by the Treasurer, except for rent and taxes, without the sanction of the Council.

VIII. Candidates for admission to this Society shall be proposed and seconded at an Ordinary Meeting, and shall be balloted for at the next Ordinary Meeting. Two-thirds of the Members balloting shall elect.

IX. The Annual Subscription shall be £1 1s. payable on the 1st January of each year. And all joining after the close of the present year (1874), shall pay an entrance fee of £1 1s. in addition to their annual subscription.

X. No Member whose subscription shall be three months in arrear shall participate in the advantages offered by the Society.

XI. At Ordinary Meetings of the Society any Member present shall have the privilege of introducing one visitor, who, with the permission of the Chairman, shall be allowed to take part in the discussion.

XII. The Ordinary Meetings shall be held each month, at such time and place as the Council shall appoint.

The order of business shall be as follows :—

1 Names of Visitors present shall be read aloud by the Chairman.

2 The minutes of the last meeting shall be read, proposed for confirmation to the Meeting, and signed by the Chairman.

3 Candidates for admission shall be proposed, and those proposed at the preceding Meeting shall be balloted for.

4 Papers and written communications shall be read and discussion thereon invited, which may be limited by the Chairman.

5 The Meeting shall conclude with the examination of such specimens, drawings, &c., as may then be exhibited. And no business connected with the management or finance of the Society shall be introduced at any such Meeting.

XIII. Authors of papers must notify their intention of reading such, together with the subject thereof, to the Secretary, seven days before the next Ordinary Meeting ; and the Secretary shall issue notice of the papers to be read at each Meeting, in the order in which he shall have received notice of the same.

XIV. Upon the requisition of any six Members presented to the President and Council, through the Secretary, a Special General Meeting shall be convened,—and any proposition to be submitted to such Meeting shall be stated at length in the notice to Members, and of any such Meeting, not less than seven days notice shall be given.

XV. The Annual General Meeting shall be held in January. the place and time of meeting to be fixed by the Council. The objects of the Meeting shall be to choose the Council and Officers for the ensuing year, and hear the Annual Report on the general concerns of the Society.

# THE PROCEEDINGS
OF THE
# LINNEAN SOCIETY
OF NEW SOUTH WALES.

## FIRST MONTHLY MEETING OF THE SOCIETY,
MONDAY, 25TH JANUARY, 1875.

WILLIAM MACLEAY, ESQ., PRESIDENT, in the Chair.

### NEW MEMBERS PROPOSED.

Mr. MASTERS proposed, and Mr. Ramsay seconded the nomination of F. G. Waterhouse, Esq., South Australia, as a member of the Society. Mr. Ramsay proposed, and Mr. Bradley seconded the nomination of Douglas Helsham, Esq., Cook's River.

## PAPERS READ.

Mr. Brazier, C.M.Z.S., read the following paper, describing fourteen new species of Terrestrial, Fluviatile, and Marine Shells from Australia and the Solomon Islands :—

### *1.—HELIX (DORCASIA) BLACKALLI.

Shell deeply, rather largely and openly umbilicated, globosely depressed, very thin, translucent, light brown, irregularly striated with raised waived striæ, irregularly studded with numerous close set obtuse short bristles ; whorls, 5, roundly convex, the last large,

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* The species marked with an asterick I have placed in the Cabinet of the Linnean Society.

in front largely inflated, base roundly convex, smoother than upper surface, aperture broadly oval, peristome thin, slightly reflexed, right margin descending, columellar margin expanded and partly covering the large umbilicus.

Diam. maj. 8½, min. 7, alt. 5½ lin.

Hab. Mount Dryander, Port Denison, Queensland (Brazier).

This species resembles *Helix brevipila*, Pfr. and *Helix Coxeni* Cox in being covered with fine hair epidermis.

### * 2.—HELIX (THALASSIA) GAYNDAHENSIS.

Shell minutely umbilicated, depressed, thin, glassy, yellowish horn, obliquely, rugosely striated, whorls, 5, flattened, sharply carinated above the centre and flat ; whorls becoming more convex, flattened at the suture, keel above the suture and continuous to the apex which is slightly raised ; base quite smooth, aperture oblique, lunately rounded, peristome simple, margins distant, the right slightly descending, columellar margin thickened with white callus partly over the umbilicus.

Diam. maj. 3¾, min. 3, alt. 2 lin.

Hab. Gayndah, Queensland, found on trees under bark.

This species was obtained some few years ago by Mr. G. Masters, when in the above locality collecting the devonian mud fish *Ceratodus Fosteri.*

### *3.—HELIX (HADRA) BAYENSIS.

Shell with the umbilicus covered, depressly-globose, finely obliquely striated, marked with numerous spiral yellow and redish chestnut bands and lines ; spire conoid apex obtuse, whorls 6½, convex, last roundly convex, deflected in front, aperture oblique, peristome thickened, reflected, white, interior purplish, margins approximating, the right descending, columellar margin thickened and broadly expanded over the umbilicus.

Diam. maj. 19½, min. 16, alt. 12 lin.

Hab. Wide Bay, Queensland. (Masters.)

This species differs from *Helix Incei*, Pfr. by being a much finer and larger shell, with the umbilicus covered with broad callus, base much broader and darker in colour, and by being only found in the thick Queensland scrubs, whereas *Helix Incei* is found in every part of Queensland in the open forest country. Dr. Cox figured my new species in his Monograph of Australian Land Shells, plate 18, figure 1, as variety of *Helix Incei*, Pf.

### 4.—HELIX (GEOTROCHUS) BRENCHLEYI.

Shell narrowly perforate, conical, rather thin, very finely obliquely striated, bright straw yellow, with bright reddish chestnut band on the periphery running spirally above the suture; below the suture broad white opaque band; spire conoid, apex rather obtuse; whorls 6, moderately convex, base convex, aperture diagonal, triangularly ovate, peristome white, thickened and reflected; margins distant, columellar margin broad and expanded over the perforation.

Dia. maj. 10, min. 8, alt. 12 lin.

Hab. Maru Sound or Curaçoa Harbour, Guadalcanor Island, Solomon's Archipelago, (Coll. Brazier.)

Of this fine species I obtained only one specimen when at the above Island in H.M.S. Curaçoa in 1865, and it has been in my collection ever since in manuscript. I take great pleasure in making the description known. I have named it after the late Mr. Julius L. Brenchley, M.A., F.R.G.S. and Author of the "Cruise of the Curaçoa through the South Sea Islands," who was a great lover of Natural History.

### 5.—HELIX (CORASIA) WISEMANI.

Shell imperforated, globosely depressed, thin, obliquely finely striated, shining diaphanous, yellowish white; obtuse at the apex; whorls 3½, rather flat, rapidly increasing, the last very large, rounded at the periphery, marked with faint opaque white line running into the suture, aperture oblique, ovately rounded, peristome reflected, whitish brown, margins joined with thin callus, the right curved down, columellar margin rounded and broadly expanded, the upper part of the peristome from the centre takes a peculiar bend inwards.

Diam. maj. 14, min. 11, alt. 7 lin.

Hab. Solomon Archipelago.

This species resembles very much some of the Philippine Island forms. The specimen I have taken the description from is the only one that I have seen, and is in the collection of Mr. Charles Coxen, of Brisbane, Queensland; it was collected by Captain Ferguson, a well-known trader to the Solomons; he also having obtained the splendid *Geotrochus Fergusoni*, H. Adams. Only two specimens of it have been found; Mr. Coxon has the one, the other is in the British Museum

### * 6.—BULIMUS (EUMECOSTYLUS) MACFARLANDI.

Shell rimate, minutely umbilicated, elongately ovate, thickish longitudinally finely striated, with malleated appearance, covered with dark yellow brown epidermis; whorls 6, moderately convex the last about half the length of the whole shell, suture crenulated, aperture large, elongately oval, white within, peristome thickened and reflected, from the centre it becomes much thinner at the upper part where it joins at the suture; columella white, regularly arched with broad prominent pillars running spirally into the interior; thick deposit of callus on the body whorls and extending up to the upper part of the peristome; in the centre of the body whorl short obtuse callus tooth, in some specimens not prominent.

Length 36, breadth 14, length of aperture 19 lines.

Hab. Solomon's Archipelago. (Captain Macfarland.)

### * 7.—HELICINA (TROCHATELLA) SOPHIÆ.

Shell moderately conoid, trochiform, acutely carinated at the periphery; obliquely rugosely striated, marked with fine spiral grooves, light straw yellow, apex obtuse, not shining, whorls 5, nearly flat, carinated above the suture, base convex, smoother than above, aperture oblique, triangularly ovate, peristome yellowish white, margins distant, right thin at its juncture with the suture, columellar margin thickened with a thin plate of callus extending upwards across the body whorl.

Diam. maj. 3¾, min. 3, alt. 2 lines.

Hab. Treasury Island, Solomon's Archipelago. (Coll. Brazier.)

This species I collected at the above island inland, in the crevices of large coral blocks.

### * 8 —PUPINA MACLEAYI.

Shell rimately umbilicate, slightly acuminately oblong, solid, longitudinally finely closely striated, pale yellowish to reddish brown, spire tapering, obtuse at the apex, whorls 6½, roundly convex, suture distinct, aperture vertical, circular, peristome pale white, ½ line below there forms another fine hair-like peristome, the upper is thickened, widely expanded in front, upper part of lip divided from body whorl by a deep groove, right margin with long and wide auricle, the slit extending upwards and joined to the suture of the body whorl; umbilicus small, keel round it columellar with long wide auricle.

Length 5, breadth 2½ lines.

Hab. Endeavour River, Queensland.

This interesting species is the second of the genius that I have described with two lips from Australia; the upper lip is broad, and below it is the second, something like an hair line.

I name it after William Macleay, Esq., F.L.S., and President of the Linnean Society of New South Wales, having seen specimens of it in his collection for the first time some six months back.

### * 9.—PUPINA ANGASI.

Shell rimate, minutely perforated, pupa shape, solid, showing malleated appearance all over; reddish brown to dirty white, spire moderately turgid, apex conoid, whorls 6, 5 convex, the body whorl having a distorted appearance, the last descending, aperture vertical, sub-circular, peristome reddish brown to white, thickened and reflected, small narrow canal at the upper part of the peristome on the inner side; columellar margin with wide slit, not extending through the margin but running spirally inside of the aperture; acute keel round the perforation.

Length 13¾, breadth 6½ lines, large specimens.

Length 10½, breadth 5¼ lines, small specimens.

Hab. New Guinea. (Captain Hovell.)

This species was first taken for *pupina grandis*, Forbes, my having two and Dr. Cox two specimens of the original *pupina grandis*, collected first by the late Mr. John Macgillivray, Naturalist of H. M. S. Rattlesnake, at the Louisade Islands; this species is quite distinct, the most distinguishing character is at the columellar only having a slit and not the ear-shaped auricle of *grandis*; of some hundreds that I have seen, not one approaches to *grandis*. I have named it after George French Angas, F.L.S., C.M.Z.S., to whom I am under great obligation in comparing Australian and other shells for me in the British Museum.

### * 10.—EPIDROMUS BEDNALLI.

Shell elongately turreted, thickish, with six rather indistinct rounded elongated varices, spire straight, apex acute, whorls 8, convex, sculptured with regular close set longitudinal ribs and transversely striated; ribs noduled at the suture, white, sometimes brown, aperture ovately oblong, smooth within, collumella arcuate, smooth, straight, outer lip thickened, white.

Length 11, breadth 3¾ lines.

Hab. Guichen Bay, South Australia. (W. Bednall.)

This species approaches near to *Epidromus Brazieri*, Angas, and *Epidomus Coxi*, Brazier, two species found in New South Wales. Named after its discoverer, Mr. William Bednall, an enthusiastic and intelligent conchologist, late of Adelaide, now of Port Darwin

### * 11.—CYPRÆA SOPHIÆ.

Shell ovate, attenuated anteriorly, base rounded, extremities slightly produced, sides thickened, 13 large obtuse thick rounded teeth on the outer lip, the inner or columella with 15, the upper ones being nearly absolete, the lower thick and rounded, grooved down the centre, bright orange yellow between the insterstices; base rounded, fulvous yellow, dorsal surface freckled with minute bluish green, obscurely marked with two bands, margins forming thick fulvous yellow callus extending nearly half way up to the dorsal surface; interior of aperture bright violet.

Length, 12, breath 8, alt. 6½ lines.

Hab. Makeira Harbour, San Christoval Island, Solomon Archipelago. (Brazier.)

This beautiful *Cypræa* I obtained alive at San Christoval some years ago; but recently some have found their way to Sydney from the more western of the Solomons, but they are of a much lighter colour; at first glance one would take it to be a variety of *Cypræa errones.* Since it differs from it both in the colour of the dorsal surface, and the interstices of the teeth being of a bright orange colour, I have named this and the next species after my wife.

### 12.—CONUS (RHIZOCONUS) SOPHIÆ.

Shell turbinated, thick, dirty white, whorls 7, concave, spire short, apex acute, transversely granulated with ten conspicuous rows of grains running in the form of lines, average of one line apart and run spirally round, each grain half line apart, grains counted from edge of lip round the shell into the aperture on the columella, grains commence one line below the angle and number 34, the second row at one and half 28, third row at three and half 41, the fourth row at four and half 40, the fifth at six lines 40, the sixth at eight lines 38, seventh at ten lines, 37, eight at eleven and half lines 32, ninth at thirteen and half 34, tenth row at fourteen and half lines 33, below this rough raised lines are distinctly seen of a yellowish brown; the grains appear to be raised upon small ridges, interstices quite smooth, columellar rather straight, outer lip acute, inside crenulated or fluted at edge where the grains meet : close at upper part near angle, wide at lower extremity, interior of aperture white.

Length 19, breadth 10¾, alt. 9 lines.

Hab. Hammond's or Bannietta Island, Solomon Archipelago, found on a reef. (Coll. Brazier.)

This is one of many islands marked down upon all charts as New Georgia, and very little known to naturalists ; this beautiful shell, so far as I know, remains unique in my cabinet.

### 13.—Cassis (Casmaria) Thomsoni.

Shell umbilicated, thin, inflated, obliquely striated, light chestnut brown, spire drawn out, acute, sature obliquely angled and tabled, spiral raised line between the angle and the suture, ornamented with spots and dots of darker colour, rugosely spirally striated above last whorl, whorls 7, first two smooth, last very large, transversely closely lined, angled and studded with rather close set pointed nodules or tubercules running spirally to the apex ; below the angle smooth channel, then another raised ridge of equi-distant obtuse elongated nodules, aperture somewhat pear shaped ; interior of aperture light brown, peristome thickened, reflected, white, with four dark equi-distant roan square spots showing on the edge, the upper part with five obtuse callus teeth, little below two faint ones show, centre obsolete, lower part, which is flat, indications of more faint obtuse ones show ; columella arched, rather straight, rugosely wrinkled, upper part with six white oblong callus teeth entering spirally inwards ; thick deposit of white callus over the umbilicus, and extends in a thin plate across the body whorl to the right margin or junction of the peristome.

Length 19, breadth 14, alt. 11¾ lines.

Hab. off Sydney Heads, 5 miles due east, brought up from a sandy bottom, 45 fathom. (Coll. Brazier.)

This fine shell fell to my share the day that Captain Nares, his Officers, and Professor C. Wyville Thomson, Director of the Civilian Scientific Staff of H.M.S. Challenger Exploring Expedition. entertained a party of Australian Naturalists to a cruise outside Sydney Heads, to see the deep sea sounding and dredging carried out. And it is with pleasure that I name it after Professor C. W. Thomson. Other new species came up in the same haul, such as *Leda*, *Mitra*, *Terebra*, and *Marginella;* the rare *Typhis Cleryi*—Petit was also found for the first time on the New South Wales coast. It is recorded by Mr. G. F. Angas from the coast of New Zealand

### * 14.—BITHINIA HYALINA.

Shell turbinated, thin, glossy, shining, whitish under a brown epidermis, whorls 5, roundly convex, the last large equalling half the length of the whole shell, aperture somewhat lunate, peristome thickish, margins continuous

Length 4, breadth 2½ lines.

Hab. Eastern Creek, New South Wales.

This is the only species of *Bithinia* that I know of from Australia as being described. It is found in various parts of New South Wales, about Parramatta and Chatsworth ; it is generally found in a corroded state, the apex wholly destroyed in some specimens and covered with a thick hard coating of mud; when washed in clean water and rubbed with a brush it is readily removed

"Mr. RAMSAY read a paper, entitled:—

## Description of a New Species of Ptilotis, from the Endeavour River, with some Remarks on the Natural History of the East Coast Range, near Rockingham Bay."

## PTILOTIS MACLEAYANA.

The crown and back of the head dark brown tinged with olive all the feathers being margined with black more largely on the sides of the occiput and over the ear-coverts, forming there a black patch, feathers on nape of the neck and shoulders olive brown, almost black at the tips, where they are centred with a conspicuous triangular whitish spot, lesser wing-coverts blackish brown, having a triangular mark of whitish brown or buff at the tip, greater wing-coverts and all the wing feathers blackish brown above margined with pale buff, the primaries and secondaries have a yellowish olive tinge on the outer webs, feathers of the interscapular region blackish brown, with a triangular mark of pale buff or whitish brown down the centre of each feather, but frequently on the outer web only, those feathers nearest the shoulders having a yellowish tinge, rump and upper tail coverts olive brown. A narrow bare space below the eye yellowish; sides of the face and a line round the eye, buff, the ear coverts and patch of pointed feathers behind them bright wax yellow; chin light brown or grey, tinged with olive; from the base of the lower mandible extending underneath the eye to the ear-coverts is a narrow band of olive brown; chest light olive yellow, the feathers pointed and conspicuously tipped with bright wax yellow; breast light brown, each feather margined and tipped conspicuously with yellow; near their centre on either web an irregular triangular shaped spot of blackish brown, being less distinct on the feathers nearest the flanks and abdomen; flanks light brown, tinged slightly with olive brown; abdomen and under tail-coverts buffy white; under surface of the tail-feathers dark brown, edged with buff on their inner webs; inner webs of wing feathers on the under surface broadly margined with the same tint; under wing coverts light buff; under surface of shoulders margined with yellow. Bill black, feet and legs blackish lead colour, iris dark reddish brown, gape yellow.

Total length, 6½ inches; bill from forehead 1 inch, from angle of the mouth to tip $1\frac{1}{16}$ inch; wings from flexure 3½ inches; tarsi ⅞ inch; tail 3 inches.

The sexes are alike in plumage.

Hab. north-east coast of Australia.

This fine species of *Ptilotis*, which I propose naming in honour of our distinguished President, is closely allied to *Ptilotis versicolor* of Gould (Birds of Aust., vol. iv., pl. 34), differing somewhat in the general markings, but chiefly in the absence of the white patch behind the ear-coverts and the black and yellow markings on the sides of the head; the bird is about the same in size, and curiously enough has every appearance of being a young bird, so much so that, although I have been acquainted with this bird for some time, I deferred describing it until several more specimens were obtained. In some notes sent to the Zoological Society of London in 1868 (proc. Zool. Soc., 1868, p. 386, sp. 25, *P. Versicolor ?*), I erroneously entered it as the young of *Ptilotis versicolor* (of Gould). I have since, however, through the kindness of Mr. Macleay, been enabled to examine several fine specimens obtained by his collector, Edward Spalding, near Cooktown, and have no doubt whatever of its being a fully adult bird of a distinct species.

The original specimen referred to in my list of birds from Rockingham Bay, published in the Proceedings of the Zoological Society of London in 1868 (Proc. Zool. Soc., 1868, p 386, No. 25) was obtained by Spalding near Cardwell, and was the only one seen during his stay in that locality. During my last Natural History excursion to those parts, I was fortunate enough to obtain three others on the Herbert River, some 30 miles south of Cardwell. It is a quiet retiring species, in habits resembling *Ptilotis Lewinii*, and frequents the scrubs and bushes fringing the River Herbert. Its note is a feeble cry, resembling that of *Ptilotis chrysops*. The young assume the plumage of the adult at an early stage. This species, as far as it is yet known, has a very limited range, being confined to the brushes and scrubs of the east coast, from the River Herbert to Cooktown, on the Endeavour River. I found this district one of the richest fields for the pursuit of Natural History in Australia, and one which has almost been untouched, I found there nearly 300 species of Birds, including 10 species new to Science; several new Mammals—including a musk rat, and numerous bats.

A large tiger-cat has also been seen on more than one occasion, which may possibly turn out to be a new species of the genus *Felis*, none of which have hitherto been discovered in Australia.

The scrubs teem with insect life; large green and golden spotted Butterflies (*Ornithoptera cassandra*), with the grand blue *Papilio ulysses*, are among the commonest, On one occasion I obtained over 200 specimens of these beautiful insects before 9 a.m. Two, if not three, species of aligators and crocodiles inhabit the rivers, which makes it particularly interesting to the traveller in crossing; one specimen, however, *Crocodilus Johnstoni*, named after its discoverer Inspector Robert Johnstone, who forwarded the first and still unique specimen to the Australian Museum, is comparatively harmless, and only found in the head waters of the rivers and creeks and mountain streams; it never inhabits the lagoons, nor has it been observed in the main streams or near the coast.

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Mr. MACLEAY exhibited a series of specimens of Entozoa and Epizoa taken from a Sunfish captured by Mr. Brazier at Port Stephens on the 28th of November, 1874.

Mr. MACLEAY read the following explanatory notes:—

The small bottle marked No. 1 contains specimens of *Bothriocephalus microcephalus* (Rudolphi). This worm was found in amazing quantity throughout the intestines. I have now in my museum a one-gallon jar of spirits almost full of a nearly solid interwoven mass of these cestodes; indeed, so tangled and knotted are they, that it took Mr. Masters and myself much time and trouble to separate a few specimens for exhibition. A few small ones we got out perfect, but in no instance were we able to get the larger strobilæ in a perfect state. We succeeded, however, in unravelling one nearly perfect which measured over five feet in length, and as there are about sixty proglottides to the inch, the whole strobila must have consisted of nearly 4,000 individuals or segments. The average width of a proglottis is about a quarter of an inch.

No. 2 bottle contains specimens of *Tetrarhynchus reptans* (Rudolphi). This is also a cestode worm, but differs from the tape worms generally in its habit of making a tube or sheath, in which it is completely enveloped while it tunnels its way through the muscles and viscera of its host. A very interesting and instructive history of this worm is given by Dr. Cobbold in the September number of the Intellectual Observer for the year 1862. The specimens now exhibited were adhering in tangled masses to the integuments of the liver, while the substance of the liver itself had been almost entirely destroyed by being tunnelled through and through in all directions by hundred of these Helminths.

No. 3 is the *Distoma Contortum* (Rudolphi). This trematode was found in considerable number in the substance of the gills.

No. 4 is probably a *Cysticercus*, and is no doubt the scolex form of the taenia of some species of shark. One specimen only was found adhering to the long intestine.

No. 5 is an epizoon, found abundantly on the skin of the fish, and is most probably identical with the *Lernea* mentioned by Captain Grey in his "Travels in Australia," as having been taken in quantity off the head of a Sunfish caught by him in Western Australia; it causes irritating sores about the nose of the fish.

No. 6 is also a parasitic Crustacean, but the genus I have not been able to make out. It was found in limited numbers upon the gills of the fish.

These are all the parasites that Mr. Brazier was able to detect, but they are by no means all the ills that the unfortunate *Orthagoriscus Mola* is heir to, for there are five other Entozoa mentioned by Rudolphi, as peculiar to this animal. I may add that no instance is known of the capture of a large Sunfish in which the viscera and muscles were not completely riddled by various species of Helminths, and from this circumstance no doubt the belief has arisen that it is only when in a dying state that the adult animal leaves its natural home in the depths of the sea, and approaches the shallow waters, where it at once becomes the prey of man.

A valuable microscope was presented to the Society by the President.

## MONDAY, 23RD FEBRUARY, 1875.

WILLIAM MACLEAY, ESQ., PRESIDENT, in the Chair.

### NEW MEMBERS PROPOSED.

Dr. Fyffe was proposed by Captain Stackhouse, seconded by Dr. Alleyne.

Dr. Tucker was proposed by Captain Stackhouse, and seconded by Dr. Belisario.

Dr. Wright was proposed by Captain Stackhouse, and seconded by Mr. Kater.

### MEMBERS ELECTED.

F. G. Waterhouse and Douglas Helsham, Esqrs.

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Mr. Brazier read an amusing account of a dredging excursion along the coast of New South Wales.

Mr. Kater exhibited some microscopic preparations of Diatoms, &c., from soundings taken by H.M.S. Challenger.

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## MONDAY, 29TH MARCH, 1875.

WILLIAM MACLEAY, ESQ., PRESIDENT, in the Chair.

### NEW MEMBERS PROPOSED.

Edwin Chisholm, Esq., Surgeon, proposed by Captain Stackhouse, and seconded by Mr. Icely.

C. A. Fraser, Esq., proposed by Captain Stackhouse, and seconded by Mr. Phelps.

### MEMBERS ELECTED.

Benjamin Fyffe, Esq., Surgeon
G. A. Tucker, Esq., and H. G. A. Wright, Esq., Surgeon.

*The following papers were read ;*

# NOTES ON A NEW SPECIES OF DENDROPHIS FROM CLEVELAND BAY.

### BY WILLIAM MACLEAY, F.L.S.

During the last twelve months I have had sent to me, by Mr. Edward Spalding, from the Endeavour River and Cleveland Bay, several species of snakes, which I have not been able to identify with any of those hitherto described. I have, however, abstained from attempting a description of them, or even affixing cabinet names to them, until I became possessed of a sufficient number of specimens to enable me to trace the various changes in marking and coloration which snakes generally undergo at various stages of their existence.

In the case of the tree snake, of which I now exhibit a specimen, all necessary requirements in that respect have been fulfilled, for I have about eight examples representing the animal at various periods of its growth.

Two Australian species of the genus Dendrophis are known and have been described by Dr. Gunther, of the British Museum. *D. punctulata*, the well-known green tree snake of Sydney and the coast districts of New South Wales ; and *D. calligastra*, from Cape York, specimens of which I have also had from the Endeavour River.

The species now before you is from Townsville, Queensland, and as it is the most elongate and slender of the genus I have seen, I propose to give it the name of

## DENDROPHIS GRACILIS.

The entire length of a full-grown specimen is about 4 feet, of which the tail is quite 14 inches and very taper. The abdominal plates number 212, and the subcandals over 130 in a double row. The head is one inch long, flat, and moderately narrowed behind. The superciliary shields abut prominently over the eyes, and the loreals are more nearly square and less elongate than in the other two species. Dr. Gunther, I observe (Ann. and Mag. Nat. Hist. Series 3, vol. 20, p. 53), describes *D. calligastra* as having no loreal; but what I take to be the loreal shield in that species is of remarkable length.

The scales of the back are in thirteen rows, all elongate excepting the central and external ones. The abdominal plates are strongly bicarinated, making the central half of each quite flat; this double ridge or keel is stronger than in the other two species and extends to the very tip of the tail.

The entire upper surface is of an olive black, the under surface is yellowish white, clouded more or less with black according to the age of the individual, the young specimens being much darker than the adult. In the specimen before you, which, though full grown, is probably not an old one, the first thirty or forty abdominal plates are without any black marking whatever, the next 100 plates or so are only slightly marked on each side near the ventral ridges, but every plate getting distinctly darker as you descend. The remainder are nearly black with their posterior edges, and a broad vitta outside of each ventral ridge white. The subcaudal plates have each a black patch at its point of contact with its opposite plate, presenting the appearance of a continuous black line of lozenge-shaped markings along the entire length of the tail. The upper labial shields are white, with the exception of the eighth and the upper portion of some of the others. The lower portion of the rostral shield is also white.

# DESCRIPTIONS OF EIGHT SPECIES OF AUSTRALIAN AND TASMANIAN LAND AND FRESH WATER SHELLS.*

By John Brazier, C.M.Z.S.

## 1.—Helix (Hadra) rufofasciata.

Shell moderately umbilicated, globosely depressed, thin, minutely rugosely granulated; pale brown, marked with dark chestnut, spiral bands, whorls 5, slightly convex, regularly increasing, the last large and inflated in front, roundly convex, below the periphery the chestnut band becomes broader and runs spirally into the aperture; base white with chestnut brown round the umbilicus, aperture roundly lunate, slightly angular, peristome thin, acute, margins rather distant, the columella margin dilated partly over the umbilicus, interior of aperture white or pink, the brown bands are seen through the shell.

Diam. maj. 12½, min 9¾, alt. 7 lines.

Hab. Yardea, 360 miles north of Adelaide, South Australia.

This fine shell approaches near to *Helix Cassandra*, Pfr.; it differs very much from that species in having dark chestnut bands above and below with a large broad white band on the base, and chestnut brown round the umbilicus. I am indebted for it to Mr. Waterhouse, the Curator of the South Australian Museum.

## 2.—Helix (Hadra) Cookensis.

Shell umbilicated, turbinately globose, thin, finely obliquely striated (under the lens), rugosely granulated spirally banded and lineated with deep chestnut lines and bands, spire conoid, whorls 5½, moderately convex, the last large and roundly convex, base convex, umbilicus deep and narrow, aperture oblique, ovately lunate, purplish within, peristome slightly reflected; margins approximating, the right partly descending, columellar margin straight and broadly expanded partly over the umbilicus; with thin coating of callus across the body whorl to the upper part of the peristome.

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* In cabinet of Linnean Society, New South Wales.

Diam maj. 16, min. 13, alt. 19 lines.

Hab. Cook Town, Endeavour River, north-east coast of Australia. (Mr. Charles Coxen.)

### 3.—HELIX (RHYTIDA) LANGLEYANA.

Shell largely umbilicated, discoid, thin, very finely and obliquely sculptured, not shining, pale horn brown, spire depressed, suture channelled, whorls 3½, the three upper ones with the sculpture much rougher, the last large and roundly convex, aperture oblique, lunately ovate, peristone simple, acute, margins distant, columellar margin slightly reflected at the edge of the umbilicus.

Diam maj. 4½, min 3½, alt. 2 lines.

Hab. Macquarie Harbour west coast of Tasmania.

Of this species I have only seen one specimen; it was collected at the above locality some three years ago by Mr. W. Petterd; it comes near to *Helix Milligani* and other species of the same genus.

### * 4.—HELIX (CHAROPA) NUPERA.

Shell umbilicated, rather flatly discoid, thin, finely and regularly and obliquely striated ; interstices very smooth, white, spire flat, whorls 4, moderately convex, the last roundly convex, suture channelled, base convex, umbilicus perspective, aperture nearly vertical, semilunar, peristome simple, thin, and regular.

Diam. maj. 1¼, min. 1, alt. ¾.

Hab. King George's Sound, south-west coast of Australia, collected by Mr. G. Masters.

### * 5.—PUPA (VERTIGO) ROSSITERI.

Shell dextral, rather oblong, thin, shining nearly smooth, white, hyaline, spire turretted, apex obtuse, whorls 5½, roundly convex, the last about quarter the length of the whole shell, aperture squarely oval, armed with five teeth, one on the centre of the body whorl thickened and of a lamellated form ; second on the columella on the upper side rather sharp ; third small and thin at the lower part of the columella ; fourth on the basal margin of the interior of the aperture thick and elongated ; fifth on the inner upper side of the outer lip rather obsolete ; peristome slightly expanded, thin. Length 1¼ ; breadth ¾ lines.

Hab., Picton, Rope's Creek, Lake Macquarie, and Wingham, upper Manning River, New South Wales, (Brazier).

This species is often taken for a variety of *Vertigo Strangei*, Pf., the true typical species of *Vertigo Strangei* are sinistral, more elongated, and the aperture oval, studded with seven teeth. Dr. Cox in his "Monograph of Australian Land Shells, 1868," figures my species as a variety of V. Strangei, in plate 14, fig. 18, 18 A ; both species are found in company.

### * 6.—Amnicola Petterdiana.

Shell conical, thin, yellowish brown under a dark epidermis, whorls 6, convex, suture impressed, apex acute, peristome thickish, aperture vertical, somewhat ovate, margins continuous, thickened, and detached from the body whorl.

Length 1½, breadth ¾ lines.

Hab. Scottsdale, Ringarooma, and Emu Bay, Tasmania ; Messrs. Petterd and Legrand.

### * 7.—Amnicola Simsoniana.

Shell turbinately conical, thin, horny, green under a brownish epidermis, whorls 6, roundly convex, spire acuminated, apex roundly obtuse, aperture vertical, sub ovate, margins continuous, peristome thin, slightly expanded, channel between the columella margin and the body whorl.

Length 1½, breadth ¾ lines.

Hab. Brighton, near Hobart Town, Tasmania, (Mr. Simson.)

### * 8.—Planorbis meridionalis.

Shell discoid, light horny brown, faintly marked with oblique lines of growth, sharply carinated at the periphery, whorls 3, the last large, more than half the size of the whole shell ; large in front, moderately convex, spire depressed, base convex, depressed in the centre of the whorls, aperture oblique, hatchet shaped, peristome thin, acute, margins approximating the right joined to the left by a thin deposit of calius.

Diam. maj. 1¾, min. 1¼, alt. ½ line.
Hab. Ouse River, Tasmania, Mr. Masters.
Circular Head, ,, Petterd.

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A member exhibited a beautiful specimen of dendritic stone from Rooty Hill, which was left for exhibition with the Society.

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Two volumes of Bentham's "Florn Australiensis" presented to the Society by the Government, were ordered to be suitably acknowledged.

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Mr. Brazier exhibited a specimen of native food from the Marshall Islands, composed of pandanus and farina of some plant resembling the Taro. He also exhibited a fungus from the Loyalty Islands, much relished by the missionaries (an *Agaricus* growing on the roots of trees). Also the fungus from the same place, which is largely imported into China.

## MONDAY, 26TH APRIL, 1875.

WILLIAM MACLEAY, ESQ., PRESIDENT, in the Chair.

### NEW MEMBER PROPOSED.

A. R. Fraser, Esq., New England.

### MEMBERS ELECTED.

Edwin Chisholm, Esq., Surgeon; C. A. Fraser, Esq., New England.

Dr. Cox read the following paper on the Stone Implements of Australia and the South Sea Islands:—

The Aboriginals of this vast Continent and adjacent Isles show no exception to the almost universal custom of making use of stone as a means of searching for their food, and also for making the necessary weapons of offence and defence. The few specimens of these rude implements, which I have laid before you this evening, are chiefly those which have been used by the natives of Australia, some are from New Caledonia, a few from New Zealand, others from the Fiji Group, the Loyalty Islands, several from the Solomon Isles, and a few from New Guinea. It is now very difficult to obtain specimens peculiar to New South Wales, although it is no great time since these implements were to be got in abundance. I can myself remember seeing them in the hands of the greater number of the natives of the tribes which once inhabited in large numbers the Valley of Mulgoa near Penrith; but so thoroughly has all trace of them now disappeared that I have searched that district in vain for specimens peculiar to the tribes, and if the total disappearance of them has taken place within the short space of less than thirty-five years, I think, unless some record of these rude relics of the inhabitants of this land be made, future generations may doubt their having existed at all. In Victoria they have totally disappeared from use, and but comparatively few specimens are left on record. I have never yet been able to procure a specimen from Tasmania, although I have offered liberal rewards for them. In Western Australia stone hatchets, knives and spears (such as I show you) are still found in the hands of the dark tribes, and also in Queensland.

The hatchets found in Western Australia appear to point to one of the lowest types of creation, their stone implements being so primitive that, unless the stones were found in gum and fixed to handles, I scarcely think it would be credited that they had ever been used for the important duties they had to serve. Some are said still to be found in the hands of the natives of the northern part of South Australia, and also in the back rivers of Queensland, especially to the north-west, where fine specimens can be procured with handles fixed to them with a gum resin, just as they were originally found throughout the Continent.

Most of the specimens from New South Wales which I show you have been ploughed up in various districts such as Dapto, Baulham Hills, Monaro, Ashfield, and Kurrajong, while others have been dug out of the beds of oyster shell, found so abundant near the mouths of our principal rivers, under shelving rocks, evidently the scene of many a cooking fire. I presume the hatchets got mixed with these masses of shells by their making use of them to open the large mud oyster, which, judging from the abundance of the shells, were then to be found in quantities, or it might have been, that it was around the fire that they manufactured their implements, melting and moulding the wax which was to secure the handle to the stone. Others of the tomahawks I have received from the Wollombi, having been dug from the bottom of the large caves in that district, on the arched roofs of which are still to be found impressions of the "Red Hand" and other figures. Other hatchets have been found in the crevices of rocks about the locality where they were sharpened and the edge ground. Of these localities I shall speak presently. Generally one or more of these hatchets were to be found in the graves of the natives, but unfortunately almost all of the old mounds have disappeared, and it requires a keen eye to discover them. It seems to have been one of the native customs of the New South Wales blacks to bury the goods and belongings of the men of the tribes with the bodies, and it is in this way that I account for their being ploughed up from time to time.

The generality of these hatchets had handles fixed to them by doubling a piece of tough wood round them, the two were then bound together tightly with kangaroo sinews, and the whole plastered with the gum of the grass tree. Usually the handle is fixed so that only one end of the stone could be used; but specimens which I have only recently received from the Macdonald River, a tributary of the Hawkesbury, lead me to assume that in some instances the handles was fixed in the centre of the stone so that both edges were used. That stone hatchets have been made and used in this manner by neighbouring tribes is shown by the beautiful specimen, the property of Mr. Markey, kindly lent me by him to show this evening. The edges of those peculiar to Australia are almost invariably worn quite straight, transversely, across the stone, and curved from side to side, and with this single exception shown with only one edge sharpened. But this rule cannot be considered absolute, for I show you a stone dug from the Wollombi Caves by Mr. Brooks, Police Magistrate, of a shape totally different to any hitherto recorded as having been found in Australia. It approaches, in fact, more to the hatchets of the Fiji Group than to any other that I know of. It has a broad upper surface flat and well polished; below it is also flat and well polished, the two surfaces tapering towards each other and making a good cutting edge but bevelled off from above downwards with great precision and the angles of the different edges carefully worn off. It also presents at the opposite end a portion evidently worn down for the purpose of attaching a handle to it; and from analogy I believed it to have been fastened into a crooked handle, similar to those of the Fiji Group; and I canuot believe that it has not been introduced. The hatchets from the Solomon Isles are always conical in form and the cutting surface is not straight, but formed with a decided curve and are highly polished.

The Fiji weapons are generally long and tapering to each end, one end coming to a sharp cuttting surface, and the other morticed in an elbow shàped handle.

In New Caledonia some of the finest specimens of these hatchets are to be found. In form they are generally circular, made of green stone, flat with a cutting surface all round, and the handle is fastened by having two holes drilled through the stone, and tying the stone and handle together with fibre. Many of the handles are beautifully worked in various devices. Others appear to have been fastened to long sword-like pieces of wood by being morticed to it at one end. Stone hatchets have been found in New Zealand mounted in the same manner, and formed most formidable weapons when used in the same way as Javelins were used. The "Meri" of New Zealand, I am led to believe, was carried in the hand, having one or more holes drilled through it with the object of attaching it to the wrist of the wearer by a strong cord. These "Meris" appear to have been passed from tribe to tribe. Generally they were made of the finest green stone highly polished, and must have taken almost a generation to make, but others have been made of a hard pebble stone, and were of the same shape and similarly used.

New Guinea seems to possess two distinct forms of this weapon. One of my specimens is in the form of an adze of large size, let into an angled handle, and is used only, I am told, for cutting canoes. The other is a small rather square stone angled at either side of the cutting margin which is always curved. The convexity of the curve being set away from the handle.

The implements found in Australia proper vary considerably in the stone used, as well as in the workmanship. Usually they have been made of the flat elongated pebbles, found in the beds of many of our Australian water courses; but from facts which have come under my notice, it appears to me that the tribes resorted to certain localities in their various districts for the purpose of collecting and grinding these stones. I know of two places where the rocks in the neighbourhood have been worn on every side by grinding the hatchets, so deep indeed are these marks that they must have been the result of many years work. But in addition to grinding them in these places the natives evidently carried about with them stones for rubbing up and sharpening the edges. Specimens of these stones I now show you.

It is very remarkable, also, that all the specimens I have shown from the coast tribes are exceedingly rude and only polished at the cutting edge, while those from the interior are more perfect in form and highly polished, as seen in the specimens from the Namoi River district, while some of those of the Northern tribes of Queensland appear rather to have been formed by splitting pieces off them. In Western Australia the implements found are of the very rudest description. They do not appear to possess sufficient river pebbles from which to form their weapons, their tomahawks being merely small sharp pieces of granite stuck into each end of a lump of grass tree gum in the centre of which a handle is firmly attached, and thus forms a double tomahawk. Their knives are of two kinds, one made of a piece of sharp crystal with one end protected with fur and gum. The other specimens of knives are formed by simply sticking a number of small sharp pieces of granite in a row to a stick with gum.

I must next draw your attention to the stone weapons made in the form of arrows used either as spears or arrows, the only specimens of which are to be found on the north coast of Australia, west of Cape York. The spears are a long and formidable wooden implement pointed with a black igneous glassy crystalline stone. The arrows are tipped by the same sharp stony formation and are found in the hands of the same tribes. I have still another very remarkable weapon to show, appropriately called a "gubba gubba" or headache stone. For this rude and curious weapon I am indebted to my friend Mr. Beddome, lately Government Resident at Cape York. In the old world some remarkable round stones have been at various times found with large holes in the centre; and it has been a matter of much conjecture what these stones actually were, some suggesting that they were weights for fishing tackle, others, that they had had strings attached to them and were used for throwing at a distance. The specimens which I show you set the theory at rest, as far as Australia is concerned, for they are mounted in such a way that they may be used as a most formidable weapon of offence. The stones of which these weapons are composed, are circular in form, six inches in diameter, having a large hole in the centre through which a strong wooden handle is passed, and the two are firmly bound together with gum and fibre. The stones themselves are, as I have said, quite round and beautifully bevelled off to a very sharp edge.

These implements, of which I have three, I believe to have come originally from New Guinea and so far, I think, are the only specimens on record.

The other, and somewhat similar weapon, is said to have come from the Solomon Islands; it differs from the others by not having any sharp edge on it. In fact, it may be described as a long wooden handle with a heavy stone ring attached to the end.

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The following list of specimens were exhibited :—

Two specimens with original handles attached, fixed on with the gum of the grass tree. One from the Clarence River district, about 6½ × 3½ inches long, oval, sharpened at one end only, the edge being quite straight, *central from above downwards* for about one half of the stone. The other from the Bowen River, a tributary of the Bowen, Queensland, 5 × 2½ inches, of exactly the same shape and form. Two very large elongately square shaped specimens measuring 8 inches long, by 5½ inches broad, flattened, of a very coarse stone, the cutting edge very slightly curved, only occupying one end of the stone, from Stony Creek, near Picton, New South Wales. Two long narrow very slightly flattened specimens, about an equal thickness throughout, the cutting edge, central, confined only to one end of the stone, the opposite end, the head of the hatchet, gradually tapering off. Presented to me by D. Ashworth, of Manaro The other was ploughed up at West Dapto, Wollongong. About thirty other specimens varying in length from 6 to 2½ inches, and in breadth from 4½ to 2 inches; many others are proportionately much broader than long; most of them are smooth as if made from water worn pebbles, others are evidently roughly chipped to bring them to a proper form for use.

One from Western Australia, about 6 × 3 inches, consists of an irregular oval mass of grass tree gum, to which a wooden handle is firmly fixed in the centre below, the cutting edges are formed by sharp edged chips of granite firmly imbedded in the gum. Two knives from the same district made by fastening thin sharp chips of quartz in a line along the lower edge of a wooden handle with a similar gum, making a cutting edge of about 5½ inches in length, the wooden handle being about 16 inches. One knife from West Australia, made from a sharp chip of rock crystal which is imbedded into an oblong mass of gum covered at the end with opossum skin to prevent it from adhering to the hand.

One from the Wollombi, as described, 5½ × 1½ inches, in all probability introduced from abroad.

Two specimens from New Caledonia, the larger one oval, pointed at one end, broader and rounded at the other, much flattened, with a rather sharp cutting edge all round, measuring 7 × 4 inches; the smaller one is similar in form, but is oval, measuring 3½ inches wide by 4 inches in length, made from pale green cracked pieces of turpentine.

Two fine hatchets from Canala, New Caledonia, these are flattened discs of transparent greenstone with a very sharp cutting edge all round, ranging from 7½ to 6 inches in diameter. These two specimens have wooden handles attached about 18 inches long bound round with a soft cordage made from the fur of the flying fox and dyed dark crimson, the end ornamented by shells; there are two holes drilled through the stone about 1½ inches from the edge, and the handle is fastened to the stone by strong cordage passed through the holes.

Two from New Zealand; one consists of a flattened oval piece of greenstone with a cutting edge all round, obtusely pointed at either end, rounded at the tips, measuring 11 inches long and 5 inches wide. The other a very perfect spatulate shaped meri, about 13 inches long, 3½ inches broad at blade, having a handle with a hole drilled through.

Two from Sir George Grey's Island, New Zealand, a pale gray ragstone, flattish, elongated, somewhat rectangular at the cutting edge which is bevelled to one face, the sides are also squared, the attached end is slightly narrower and left in the rough.

Three large broad axes from New Guinea, the stone blade of which measures about 15 inches long by 6 inches at the cutting edge, and tapering to the end attached to the handle to about

3 inches, when it is rounded off; it is a flat smooth elongated stone widest at the cutting edge, which is central and rounded, and continuous with the sides of the stone, which are sharply bevelled off. These blades are set in an elbow shaped handle bent at rather an acute angle, one of the limbs being shortened and spilt to receive the blade, which is secured by being firmly bound round with thin cane, the point of the elbow is produced to a long point about 10 inches and ornamently carved. The blade in these fine specimens is always set obliquely from the long arm of the handle. Three small adzes, the heads of which measuring 3½ × 2 inches, of roughish flattened stone, the cutting surface is confined to one end, the inner face concave the outer convex, making the cutting edge arched. These stones taper towards the attached end which is left in the rough; they are fastened to a short kind of elbow shaped handle by a strongly platted bracelet of cane.

Three from the Fiji Isles also attached to elbowed handles, but made from thicker pieces of wood, the stone being fastened by a twine of platted cocoanut fibre. The stone portion of these varies in length from 6 to 9 inches, and from 1½ to 2 inches in breadth, they are long, narrow, slightly fastened stones of nearly an equal width throughout, the cutting edge is confined to the unattached end which is slightly narrowed round laterally.

Six specimens from the Solomon Group of Isles, four of which are from Florida Isles; these last vary in length from 5½ to 3 inches, they are elongated triangles, the base of the triangle being formed by the cutting edge, which is curved and rounded from side to side, and formed on the outer surface of the stone, being very much bevelled off from within; the whole surface is smooth and polished, flattened laterally, with blunt rounded edges. Those from the other Solomon Isles differ only in being narrower and longer, measuring in length about seven inches.

Two from the Loyalty Isles, very similar in form and general appearance to the last, but contracted above the cutting edge, and about an inch longer and broader at the cutting edge, which is also slightly more central.

Some twenty other specimens were exhibited from various isles in the South Seas, the exact localities of which have not yet been determined.

One specimen from Ambrym Isle, New Hebrides Group, similar in shape to those from Florida Isles, but shorter and broader at the cutting edge, made from the shell of the tridochna.

One remarkable specimen was also exhibited by Mr. Markey, it was a stone about a foot in length, almost round, with a cutting edge at either end, and to the centre was fastened a handle of strong true cane; its locality is said to be New Zealand, but from the nature of the cane handle appears to be doubtful.

Three fine specimens of what are known as gubba gubbas—these consist of circular discs of stone about 7 inches in diameter and about 2½ inches from side to side, through which a round hole is bored, and into this hole a wooden handle about three feet long is fixed; the circumference of the stone is ground to a sharp edge all round.

Two fine spears about ten feet long, to the end of which has attached a piece of sharp pointed flint of about ten inches long.

## MONDAY, 31ST MAY, 1875.

W. J. STEPHENS, ESQ., M.A., in the Chair.

### NEW MEMBERS PROPOSED.

The Honorable Leopold Fane de Salis, M.L.C.; E. O. Moriarty, Esq., Engineer of Rivers, &c.; Captain Eldred; The Rev. J. V. Atkin, M.A.; H. Prendergast, Esq.; and Dr. Tarrant, Kiama.

### MEMBERS ELECTED.

A. R. Fraser, Esq., New England.

## MONDAY, 28TH JUNE, 1875.

J. C. Cox, Esq., M.D., in the Chair.

### MEMBERS ELECTED.

The Honorable Leopold Fane de Salis; E. O. Moriarty, Esq.; Captain Eldred; The Rev. J. V. Atkin, M.A.; R. Prendergast, Esq.; and Dr. Tarrant, Kiama.

## MONDAY, 26TH JULY, 1875,

The Honorable L. F. DE SALIS in the Chair.

### NEW MEMBERS PROPOSED.

Thomas Francis, Esq., C.E.; C. H. Hawkes, Esq.

Mr. E. P. RAMSAY, F.L.S,, read the following paper descriptive of a new species of *Trichoglossus.*

### TRICHOGLOSSUS. *(Glossopsitta)* AMABILIS.

***Adult Male.***—Forehead (all above a straight line from the eye to the nostril) and the whole of the upper surface bright green, darker on the wings and tail, brightest on the rump and upper tail coverts, but having a slight olive-green tinge on the upper wing coverts, interscapular region and back; the first primary quill, the tips and all but a narrow green margin to the outer webs of the remaining quills, blackish brown; the inner webs of the secondaries and concealed portions of the wing coverts blackish brown; primaries and secondaries below, and the outer series of the under wing-coverts, dark brown, the first two secondaries having a faint spot of yellow near the base of their inner webs, being visible only on the under surface; the remainder of the under wing-coverts and margins of the shoulders bright green, of the same tint as the under surface of the body; lores (all below a straight well-defined line from the eye to the nostril), cheeks, and throat bright vivid crimson, bounded below by a crescent-shaped band across the chest of bright yellow, which reaches to the sides of the lower neck; legs bright vivid crimson, with a few feathers of bright yellow, and of violet at the thighs; under tail-coverts green, tinted with yellow near the base; round the vent a small patch of crimson feathers, and a few tinged with violet; ear-coverts, sides of the neck, lower part of the chest, and the remainder of the under surface bright green; two or three yellow feathers on the sides of the chest under the wings in some specimens, and a few of crimson and of yellow scattered over the abdomen; the central portion of most of the feathers on the abdomen tinged with yellow; tail above dark green, below blackish brown; the terminal third portion of all the feathers yellow; on the inner webs, near the base of the three external quills, on either side is a large oblong blotch of bright crimson, margined below with pale yellow. Bill and cere, orange red; tip of upper and lower mandibles dark horn colour; orbits orange yellow; tarsus and feet flesh red. Total length 6·7 inches; wing 3·6; tarsus, 0·46; tail 3·25; bill 0·5; culmen 0·35.

*Adult Female.*—Similar in size and markings to the male, but less highly coloured; the tail not so extensively tipped with yellow, and only an indication of the yellow band across the chest; the *four* exterior tail feathers on either side are blotched with crimson, as in the male, the crimson being more distinctly margined near the base and sides with yellow, but, as in the male, confined to the inner webs of the feathers. The abdomen and legs are less ornamented with crimson and yellow, no yellow spot at the base of the secondaries as described in the male. Total length 6·5; tail 3·05; wing 3·6.

*Habitat*, Ovalau, Fiji Group, S. S. Islands.

*Remarks.*—This very beautiful species was found at Ovalau by Mr. Charles Pearce, who was fortunate enough to procure both sexes from a large tree bearing bunches of yellow blooms, from which they extracted a honey-like fluid; they had not previously made their appearance, and only remained while the tree was in flower. The flock consisted of about thirty individuals, the stomach contained nothing but the fluid extracted from the blossoms, and a little pollen from the stamens of the flowers.

This species differs very little from those of the genus *Trichoglossus* and its sub-genus *Glossopsitta,* except perhaps in the proportionably greater length of the tail, and the relative length of the tibia and tarsus, as will be seen by the accompanying measurements :—

Average sized specimen of *G. Australis:* Total length, 5·8 inches; wing 3·8; tail 2·3; tibia 1·05; tarsus, 0·4. T. (G.) *amabilis:* Total length 6·7 inches; wing 5·0; tail 3·25; tibia 1·15; tarsus 0·46.

## MONDAY, 30TH AUGUST, 1875.

The Honorable L. F. DE SALIS in the Chair.

### NEW MEMBER PROPOSED.

W. H. Drake, Esq.

### MEMBERS ELECTED.

Thomas Francis, Esq., C.E.; C. H. Hawkes, Esq.

## MONDAY, 27TH SEPTEMBER, 1875.

W. J. STEPHENS, Esq., M.A. in the Chair.

### MEMBER ELECTED.

W. H. Drake, Esq.

Mr. RAMSAY read some notes on an Entomostracous Crustacean, (*Lepidurus viridis*) which had been sent for identification, and also exhibited and gave the following description of a new genus and species of marsupial.

## Description of a new genus and Species of Rat Kangaroo, allied to the genus *Hypsiprymnus*, proposed to be called *Hypsiprymnodon moschatus*, by E. PIERSON RAMSAY, F.L.S., C.M.Z.S., Curator of the Australian Museum, Sydney.

I had provisionally placed this animal, on account of its dental formula and the formation of its premolars, in the genus *Hypsiprymnus*, from which, however, it must be separated, as will be seen from the following remarks; and on account of these peculiarities and differences, I have formed for its reception the *new genus* I now propose to call *Hypsiprymnodon*, which may be thus characterised:—

### HYPSIPRYMNODON. *Gen. Nov.*

| | | | |
|---|---|---|---|
| Incisors | $\frac{3-3}{1-1}$ | Canines | $\frac{1-1}{0-0}$ |
| Premolars | $\frac{1-1}{1-1}$ | Molars | $\frac{4-4}{4-4}$ |

Skull very similar to that of *Hypsiprymnus*, but more elongated anteriorly, the distance between the premolars and canines, and between the canines and third incisor, comparatively greater than in either *Hypsiprymnus* or *Betongia*; angular process of mandible broad and rounded, the ascending of ramus short, rather wide, not much longer than the condyloid, which is also comparatively short; the posterior palatine openings confluent, narrow, acute anteriorly, the anterior margins meeting the exterior-lateral at an acute angle, curved outwards and reaching to opposite the posterior margin of the premolars; anterior palatine openings linear, somewhat oval, twisted, acute posteriorly, (the posterior and basal portions of the skull have been cut away).

The teeth are identical with those of *Betongia* and *Hypsiprymnus*, with these differences; the premolar narrower and placed more obliquely in the jaws—the canines small and feeble; incisors long, narrow, rounded externally. The fore feet of five toes, regular, hand-like, last two joints of the toes scaly, the nails small and weak; the second and fourth toes nearly equal, the third only a little longer than the second, the fifth a little longer than the first, which is the shortest; wrists and first joints of the toes covered with short stiff hairs. The hind feet long, slender, of five toes, the first (thumb) placed far behind, well developed, nearly as long as the fifth or outer toe, second and third conjoined, as in all the kangaroos, in length equal to the outer; the fourth longest, about one-third longer than the outer toe; all except the first (thumb) covered with hair, and having short weak nails; ears large, rounded, bare within, clothed with short hair at the base, on the outside margins nearly bare; tail about half the length of the body, about an inch of the base clothed with hair, the remainder naked, scaly, intermixed with a few short minute hairs.

### HYPSIPRYMNODON MOSCHATUS. *Sp. Nov.*

All the upper surface of the body clothed with close and rather stiff fur, of a rich golden colour, mixed with black, the base of the hairs being of a dull dark wood-brown, the remainder yellow and black barred; head, face, and lower parts of the legs, dark brownish grey—the hairs brown at base, barred with black and white, and being much shorter than on the back—feet and hands dark chocolate-brown, tail blackish brown, with a lead-coloured tinge—along the centre of the throat and chest to the abdomen, a few patches of white. The sexes are alike in colouration, and emit a strong odour of musk. The young of a more golden hue, and less white on the under parts; irides dark hazel—nostrils blackish—tips naked. Total length of adults 12 inches, tail 6 inches; fore feet 0·9 inch, hind feet from ankle 1·8 inch. *Habitat:* The dense brushes and scrubs in the Rockingham Bay district. I first met with this highly interesting and anomalous marsupial, while on a visit to the Herbert River in January, 1874, where it inhabits the dense and damp portions of the scrubs which fringe the rivers and clothe the sides of the coast range in that district. The animal is by no means rare, yet from its retiring habits and dense nature of the parts frequented by it, is at all times difficult to obtain. Its habits are chiefly diurnal, and its actions when not disturbed by no means ungraceful; it progresses in much the same manner as the kangaroo rats *(Hypsiprymnus)*, to which it is closely allied, but procures its food by turning over the *debris* in the scrubs in search of insects, worms, and tuberous roots, frequently eating the palm berries (*Ptychospeema alexandæ*) which it holds in its fore paws after the manner of the phalangers sitting up on its haunches, or sometimes digging like the bandicoots (*Perameles*). Seldom more than one or two are found together, unless accompanied by the young. In March, 1874, I obtained from Mr. K. Broadbent, a female with two young in the pouch, very small, and resembling young bandicoots. During the same month a half-grown young one was shot in company with the adult male and female. They evidently breed during the rainy season, which lasts from February to May. In the young the white marking of the under surface is not so extensive, but the fur of the upper surface is of a more golden hue than in the adults. Both sexes have a strong although not disagreeable odour of musk, which appears to be stronger in the female. Their range of habitant extends over the whole of the scrubs of the Rockingham Bay district, and doubtless as far north as the Daintree River. Mr. Spalding did not obtain any during a recent visit to the Endeavour River.*

Specimens of an annulose animal resembling *Planaria* were exhibited. They were sent by Mr. ICELY of Coombing, and were found in his garden.

### DONATION.

Four volumes of the "Flora Australiensis" were received as a donation from the Colonial Secretary, making, with the two previously presented, the entire number as yet published.

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* I found this species well-known to many of the settlers in the district; but I am chiefly indebted to Mr. Broadbent's energies for the specimens in my collection.

## MONDAY, 25TH OCTOBER, 1875.

WILLIAM MACLEAY, ESQ., PRESIDENT, in the Chair.

### NEW MEMBERS PROPOSED.

Hugh Kennedy, Esq., University; A. Dodds, Esq.; Francis Lark, Esq., Sydney.

The PRESIDENT read the following paper, entitled NOTES ON THE ZOOLOGICAL COLLECTIONS MADE IN TORRES STRAITS AND NEW GUINEA DURING THE CRUISE OF THE "CHEVERT."

It is now five months since I took my departure from Sydney for a few months' cruise among the Islands of New Guinea and Torres Straits. I was accompanied, as you are aware, by Mr. Masters and Mr. Brazier, both members of our society, and I had, besides, with me, two very competent taxidermists and collectors—Messrs. Spalding and Pettard. The results of the expedition I hope to be able to exhibit to you in a few weeks, upon the arrival of the "Chevert," now on her way from Cape York. In the meantime I have jotted down, from memory, a few notes and observations, which, I trust, will not be altogether uninteresting to you.

The mammals of New Guinea are, almost without exception, marsupial; the exceptions are, the New Guinea pig—*Sus Papuensis*, which seems very abundant, and is frequently domesticated; a small breed of dog, kept in a domestic state by the natives—probably a variety of the dingo of Australia; a few *muridæ*, and several species of large frugiverous bats. Of course, the deer, monkeys, and tigers of Captain Lawson exist only in imagination, and, I think, the same may be said of the buffaloes of the Rev. Mr. Macfarlane, the Congregational Missionary at Cape York. We were not fortunate in procuring many of the mammals; but, kangaroos of various sizes and genera appeared to be abundant; and we saw specimens of *Cuscus*, *Belideus*, and other *Phalangers*. We saw, also, a species of *Perameles*, but no *Dasyurus*, or other carnivorous marsupial.

The collection made of birds during the trip amounts to about 1000 specimens. The avifauna of New Guinea resembles, in a great degree, that of Australia, the same genera, and often the same species, being common to both countries ; but there is, besides, in New Guinea, a distinctive type of birds, which more resembles the fauna of the Dutch Archipelago. Among the most common of the Australian forms in New Guinea is the Bee-eater—*Merops ornatus.* It is, with us, only a summer visitor. It seems to commence its annual migration southwards as early as August. Throughout the early part of September, I observed, or heard, scattered flocks of from twelve to twenty of them passing the ship at all hours of the day and night, and making direct for the main land near Cape York. They flew low, and with anything but a steady flight. I imagine their migration is a very slow and painful affair, for it is generally the month of November before they reach their breeding grounds on the Murrumbidgee.

Another summer visitor to the northern parts of Australia from New Guinea is the Torres Straits pigeon—*Myristicivora spilorrhea.* We found that it commenced its migration southwards in the month of July ; at that time the low islands of Torres Straits were covered with them, their favourite fruit—the date plum—being then ripe and abundant. It is not, however, till February, I am told, that these birds reach their southern limit, about Port Denison. The well known dollar bird *Eurystomus pacificus,* is another of our summer birds which seems to winter in New Guinea. The *melliphagidæ* and flycatchers of New Guinea were mostly of common Australian genera, while the raptores and grallatores were, in many instances, of the same species. Of the truly Papuan Fauna, the most beautiful things we got were kingfishers, pigeons—several species of great beauty, Scansores of brilliant colours, and specimens of *Buceros ruficotlis.* A most welcome addition to my Australian collection was made by Mr. Masters, at the North Barnard Isles. He procured three specimens of the beautiful *Ptilorhis Victoriæ,* a bird which has never yet been found anywhere else. I have also been able to add very largely to my collection of Australian sea birds, more particularly among the *Sternidæ.*

The reptilia I found to be numerously represented in New Guinea, and there are few, if any, of the Islands in the Straits, however small, in which there were not some lizards. At Katow, I got, by the assistance of the natives, a number of species of snakes, lizards, and tree frogs; the snakes all, I think, of undescribed species, and, with one exception, venomous. All the rivers swarmed with alligators, but they were not easily killed. I got two, however, while at Katow, the largest only nine feet long; the species I have not yet made out. At Hall Sound I got a huge *Liasis*, and at Darnley Island a species of *Morelia*. Some of the lizards are of great beauty, and all quite new to me.

My collection of fish numbers about 800, the largest portion of them, however, from the northern coast of Australia. I found it difficult to get the fish of New Guinea; it was impossible to haul the seine on the rough coral beaches; the hook was tried, but ineffectually, and the natives of Hall Sound, though always catching fish, would never part with anything edible. I managed, however, to get some very remarkable looking things. I should say that sharks and rays are by far the most numerous tribes of fishes in Torres Straits and the adjacent reefs. I got many species of each. Near the muddy coast of New Guinea, the *Siluridæ* seem well represented. Everywhere, of course, among the reefs *Labridæ* of the most beautiful colours were abundant. Of Percoid fishes, those of the division *Pristopomatidæ* were the most numerous, though the *Squamipennes* were also rather abundant. I got one very curious acronurous fish, evidently of the genus *Naseus*, but with the frontal *horn* of very great size. At Darnley Island the ship was attended for several days by a number of large sucking fish *Echineis Remora*, who adhered to the ship's side, but let go their hold the instant anything edible was thrown overboard. The only fish I met with, having a claim to recognition as an article of food, is a species of large-scaled mullet—*Mugil*, which abounds about Cape York, and is really delicious.

Of marine mollusca, a very large collection has been made, so large that I cannot give a guess even at the number and value of the specimens. There are among them many rare and new species; these, as well as many jars full of echinodermata, annelida, polyzoa, &c., in endless variety, were collected on the reefs at low water, or dredged for at various depths, along the north-east coast of Australia, and in Torres Straits, whenever opportunity offered. But nowhere was the yield so good as at Darnley Island. During a few days dredging there we got more fine shells and annelids than at all the other places taken together. The collection of land shells also, chiefly from New Guinea, comprises many new species of Helix, &c. I cannot, I regret to say, give you at present more detailed information in regard to these testacean mollusks. When Mr. Brazier arrives he will be able to furnish the fullest information on the subject to all those curious in such matters.

The collection of "ARTICULATA" I look upon as extremely valuable. The insects were chiefly collected at Cape York, Darnley Island, and New Guinea, and in all these places there was a general resemblance to the Polynesian fauna, and an extraordinary absence of the usual Australian forms. The diurnal lepidoptera were numerous, and in great variety. *Ornithoptera pronomus* was common at Cape York, and *O. Poseidon* at Darnley Island and Hall Sound. The coleoptera were, upon the whole, rare, and difficult to get, though we managed to scrape together several thousand specimens. *Longicornia* and *Curculionidæ* were the most abundant. Of *Lamellicornia, Phytophaga, Buprestidæ,* &c., there were few, and the almost entire absence of the carnivorous ground beetles was most remarkable. There are, however, many new species among the insects of all orders, and some of great size and beauty. Mr. Spalding cut out of one tree at Hall Sound a dozen specimens of *Batocera Wallacei*—an insect of great rarity. The collection of *Arachnida* was also good.

*Crustacea* were got in great numbers and variety on the reefs, in dead coral and in the dredge.

Altogether I have succeeded in getting together a vast and valuable collection—a collection which, considering the short time at my disposal, seems wonderful, and which affords undoubted proof of the industry and zeal of my staff of collectors. For, it must be remembered that, though the full time of my intended absence from Sydney has expired, the actual time available for the purposes of the voyage was much less than I calculated on. The "Chevert," though a good, dry, and comfortable ship, was unable to sail against the wind, and it was so constantly against us during a great part of the expedition, that I do not think we had more than sixty days for collecting during the five months' cruise. The làborious task of arranging, naming, and describing this very large collection still remains to be done. I am desirous that the complete zoology of the expedition should be published in this country, and indeed, would be glad if all papers on this subject, particularly those descriptive of new species could make their appearance in the transactions of this society. It may, however, be a long time before some of the classes of marine animals can be entered on. For the present, Mr. Masters, I hope, will undertake the mammals and birds of the Expedition. Mr. Brazier, I have no doubt, will take the testacean mollusks in charge. I may, probably, if I have time, take in hand the reptiles, fishes, and insects ; but, I confess, that I cannot at present think of any one who is likely to do justice to the crustacea, echinodermata, annelida, polyzoa, polypifera, and other still lower forms of animal life.

I have confined this paper to a brief notice of the zoological part of my collection alone, but I have not neglected ethnology and geology. As regards the botany of the Expedition, I am in hopes that Sir W. Macarthur may communicate something to the Society on that subject.

Mr. Masters exhibited a number of fine specimens of the gigantic *Batocera Wallacei*, taken in the vicinity of Hall Sound, New Guinea.

DONATION.

A very fine and perfect skull of a species of *Xiphius* was presented to the Society by Dr. Charles M'Kay.

## MONDAY, 29TH NOVEMBER, 1875.

William Macleay, Esq., President, in the Chair.

### MEMBERS ELECTED.

Hugh Kennedy, Esq., University; A. Dodds, Esq; Francis Lark, Esq., Sydney.

Mr. E. P. Ramsay read the following papers :—

## Characters of a new genus and species of Passerine bird, from the Fiji Islands, proposed to be called VITIA.

This is an interesting passerine form, which appears to be allied to *Synallaxis* on the one hand, and *Troglodytes* on the other. I have not yet determined to which family of the Passeres it most properly belongs, but for the present I place it among the Troglodytes (*Troglodytidæ, Sclater.*) I can find no *genus* in any of the works at my disposal, *Grey's Genera of Birds* included, into which I can place it with any degree of certainty, and although much averse to forming new genera, I do not see how I can possibly avoid it, unless by leaving it for some one else to do. I therefore propose to form, for the reception of the present species, the genus *Vitia* which may be thus characterised.

*Bill* as long, or about the same length as the head, straight, comparatively strong, as wide as high at the base, compressed laterally past the nostrils, culmen very slightly curved to the tip, which is entire

*Nostrils,* lateral, basal, placed in a longitudinal groove; the opening oblong, partially covered with membrane; distance between the anterior margin of nostril and tip of the bill nearly equal to the distance between the nostrils and angle of the mouth.

*Wings,* short, 1st quill about one-half the length of 2nd; 2nd one-fourth shorter than 3rd, which is about equal to the 9th; the 4th, 5th, and 6th about equal and longest; the 7th and 8th very little less; the remainder gradually decreasing to the innermost secondary.

*Tail,* of ten feathers, long, graduated, somewhat rounded—the lateral feathers only slightly (*one-fifth*) shorter than the central.

*Tarsus,* long, about one-third shorter than the *tibia,* slender, scales obsolete; hind toe, long, strong; the claw equal to the length of the toe; lateral toes uneven, the inner shorter than the outer, *with its claw* about equal to the length of the middle *without its claw*; outer toe joined to centre toe from about the middle of first joint.

In the formation of the wings and legs this genus resembles that of *Malurus* and *Sericornis.*

### VITIA RUFICAPILLA, *Nov. Sp.*

*Adult Male.*—The whole of the head rufous, paler rufous on the sides of the face; the throat, chest and centre of the abdomen ashy white; the sides of the neck and of the body, light ashy brown, becoming browner at the flanks and under tail-coverts; tail underneath brown crossed by numerous indistinct narrow wavy bars of darker tint, seen only in certain lights, above dark brown, with a slight tinge of reddish brown or inner margins of the quills; wings below brown, the quills margined with whitish along the inner webs towards the base; under wing-coverts white, wings above dark brown, slightly tinged with reddish brown on the outer margins of the quills and upper wing-coverts; lower hind neck, back and remainder of the upper surface brown, with a slight reddish brown tinge on the wings and upper tail-coverts. Bill dark horn-brown, lower mandible whitish, legs and feet light brown, iris brown; total length, 4·8 inches; wing, 2·4; tail, 2·5; tarsus, 0·97; bill from forehead, 0·7; from angle of the mouth, 0·72; from nostril, ·4; height at nostril, 0·2; width, 0·2.

*Adult Female.*—In size and plumage same as the male.

This species was found at Kandavau, in the Fiji group. It was discovered in pairs traversing the more open parts on the sides of the ranges, flitting from bush to bush, and emitting a weak monosyllabic note. When separated they use a rather loud call note.

Description of a new species of Blackbird (*Merula*):—

### MERULA RUFICEPS, *nov. sp.*

*Adult Male.*—The whole of the head, neck, and chest ochraceous buff or pale rufous; the remainder of the body, upper and under tail-coverts, and of the wings and tail above, black; under surface of wings and tail blackish brown; legs brown, lower half to the knees buff; bill, tarsi, and feet gamboge yellow; iris, pale brown; total length 6½ inches; wing, 4·1; tail, 2·7; bill from forehead, 0·9; from angle of the mouth, 1·1; tarsus, 1·2.

*The female* is similar in plumage, one specimen not quite adult has the legs of a uniform brown colour, and is slightly larger than the male; total length 7½ inches; wing 4·1; tail 2·9; tarsi 1·2; bill from forehead 0·9; from angle of mouth 1·1.

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Description of a new species of Flycatcher (*Rhypidura*):—

### RHYPIDURA PERSONATA, *nov. sp.*

All the upper surface brown, of a duller and darker tint on the head and neck; upper tail-coverts and tail blackish brown, the outermost feathers on either side of the tail margined with white, narrowly at the tip, and becoming only a very narrow line of white margining the inner webs, the shafts of these feathers below white, the next two on either side having only a very small white mark at the apex; wings above brown, the inner secondaries margined on the outer webs with dull light buff, under wing-coverts brown margined with silvery white, head and neck dark brown; a line of white extends from the forehead over the eye to the upper part of the ear-coverts; lores, ear-coverts, and a narrow line round the eye blackish brown; from the posterior angle of the eye over the ear-coverts a short line of white; throat and sides of the neck below white; from the centre of the throat, extending and widening out on the chest, is a broad somewhat triangular patch of black; the lower part of the chest, the breast, and remainder of the under surface of the body and under tail-coverts white; the sides and flanks tinged with olive-brown, more extensively in some than in others; bill black; lower mandible whitish; legs and feet dark lead blue; iris light brown; total length, 6·2 inches; wing, 3·2; tail, 3·75; tarsus, 0·4; bill from gape, 0·55; from forehead, 0·4; from nostril, 0·3.

The sexes are alike in plumage, but the female appears to have a greater extent of olive-brown on the flanks and sides.

In actions and habits they closely resemble the *R. albiscapa* of New South Wales, being seldom seen in the "opens," usually confining themselves to the dense brushes and thickly wooded parts.

The above described *new species* were discovered by Mr. Charles Pearce in the Fiji Islands; and now form part of the magnificent collection at Elizabeth Bay. I am indebted to Mr. William Macleay, F.L.S., for the privilege of describing these new and interesting forms.

Mr. BRAZIER exhibited six rare species of *Cypræa* (*Walkeri, staphylæa, limacina, miliaris, quadrimaculata, and asellus*) from Darnley Island, and a new *Helix* from Hall Sound, New Guinea.

## MONDAY, 27TH DECEMBER, 1875.

WILLIAM MACLEAY, ESQ., PRESIDENT, in the Chair.

Mr. MASTERS communicated the following Paper:—

## ZOOLOGY OF THE "CHEVERT."—ORNITHOLOGY.

### PART I.

I have been requested by Mr. Macleay to undertake the identification and description of the Birds collected during the voyage of the "Chevert" on the north-east coast of New Holland, and the southern shores of New Guinea, during the months of June, July, August, and September of this year.

I believe that I shall be consulting the convenience of Ornithologists, by making separate lists of the Australian and New Guinea Birds. Accordingly, this part will be limited to the Birds of Australia, including amongst them all those which were collected on the islands of, and in Torres Straits.

### 1. HALIASTUR LEUCOSTERNUS, *Gould.*

One male, Brook Island. Seen occasionally in Torres Straits, also at New Guinea.

### 2.—LEUCOSPIZA NOVÆ HOLLANDIÆ, *Gmelin.*

One female, Cape York. A very fine specimen, and the only one seen.

### 3.—ASTUR APPROXIMANS, *Vigors and Horsfield.*

One male, and two females, Cape York.

The male differs from the females, by having all the under surface finely and transversely barred, and by the collar showing much more distinct.

### 4.—HIERACOGLAUX CONNIVENS, *Latham.*

One male, Cape York.

### 5.—PODARGUS PHALÆNOIDES, *Gould.*

One female, Cape York. A very fine and beautifully marked specimen.

### 6.—PODARGUS GOULDI. *N. Sp.*

General plumage of a pale marbled grey, plume at base of bill large and erect, the central feathers rounded and tipped with white, a narrow line extending from the base of the bill to the upper part of the eye, and another beneath the eye white; feathers of the occiput, back of the neck, and partially of the back with the centre black, and tip white; entire under surface of a lighter colour than the upper, and marked with long narrow stripes of brownish black; these marks being larger and more distinct on the chest; primaries above dark brown, with numerous bands of white; beneath of a lighter colour, the bands becoming obsolete towards the extremity; coverts of the same character as the feathers of the back, but with larger blotches of white, forming two indistinct bands along the wing; under coverts white; tail of average length, marked throughout with narrow black fasciæ; these bands becoming oblique in the two central feathers, and alternate; the shafts of the central feathers brown above, and white below, of the others black above and brown below; bill brown, with the base of the upper mandible at the gape yellow; legs and feet robust, and of a dark leaden hue.

Total length, 14 inches and 7 tenths; wing, 8·75; tail, 6·9; tarsi. 1·1; middle toe, without the claw, 1·45; bill from forehead, 1·7; bill from angle of the mouth, 2·6; width across angle of the mouth, 2·2.

One male, Gulf of Carpentaria, obtained from Mr. Broadbent.

This fine and distinct species might at first sight be taken for a light coloured variety of *P. phalænoides;* but the legs and feet are much more robust than in that species. I give the measurements of the middle toe (without the claw) of both, to show the great difference that exists. *P. Gouldi,* 1·45; *P. phalænoides,* 1·05.

I name this species after John Gould, Esq., F.R.S., the well-known author of our best works on Ornithology.

### 7—PODARGUS PAPUENSIS, *Quoy and Gaimard.*

Two males and three females, Cape York.

No two specimens of the five obtained are alike; they vary in colour from a light grey to a sandy buff.

### 8.—EUROSTOPODUS GUTTATUS, *Vigors and Horsfield.*

One female, Gulf of Carpentaria. Obtained from Mr. Broadbent.

### 9.—CAPRIMULGUS MACRURUS, *Horsfield.*

One male, Brook Island.

### 10.—CYPSELUS TERRÆ REGINÆ, *Ramsay.*

Two males and one female, Fitzroy Island.

Seen in considerable numbers; towards evening they all left for the main land, keeping at a great height.

### 11.—HYLOCHELIDON NIGRICANS, *Vigors.*

Two males, Cape York.

This common Sydney swallow appears to be rare towards the north, as it was only seen upon two or three occasions.

### 12.—MEROPS ORNATUS, *Latham.*

Two females, Cape York. Common everywhere.

### 13.—DACELO CERVINA, *Gould.*

One female, Gulf of Carpentaria. Obtained from Mr. Broadbent.

Examples of this bird were seen at Cape Grenville and Cape York. Its excessive shyness prevented any possibility of getting within shooting distance.

### 14.—TODIRAMPHUS SANCTUS, *Vigors and Horsfield.*

One male and two females, Palm Island; one male and one female, Cape Grenville; one male and one female, Cape York; one female, Dungeness Island; one female, Bet Island; one male, Darnley Island.

Very widely distributed, and seen everywhere, New Guinea included.

### 15.—TODIRAMPHUS SORDIDUS, *Gould.*

One male, Cape York; two males, Dungeness Island; four males and four females, Long Island.

Common on Dungeness and Long Islands, where it frequents the dense mangroves.

### 16.—CYANALCYON MACLEAYI, *Jardine and Selby.*

One female, Fitzroy Island; one male and one female, Cape York.

Cape York appears to be its most northern limit, as it was not observed upon any of the islands in Torres Straits.

### 17.—SYMA FLAVIROSTRIS, *Gould.*

One male and one female, Cape York.

### 18.—ALCYONE PUSILLA, *Temminck.*

Two males and three females, Long Island, Torres Straits,

Found in the same situations as *Todiramphus sordidus*, not uncommon, but very shy, and difficult to get.

### 19.—ARTAMUS ALBIVENTRIS, *Gould.*

One male and one felmale, Gulf of Carpentaria. Obtained from Mr. Broadbent.

### 20.—ARTAMUS LEUCOPYGIALIS, *Gould.*

Two males and two females, Cape Grenville: one female, Cape York. Common at both places.

### 21.—CRACTICUS QUOYI, *Lesson.*

One male and two females, Cape York.

Frequents the dense thickets, and is extremely shy and wary; it was also seen on the Barnard Isles.

### 22.—GRAUCALUS MELANOPS, *Latham.*

One male, Palm Island; one young female, Sue Island; and and one young female, Cape York.

Seen occasionally at the different Islands through the Straits, but rare, and wary.

### 23.—GRAUCALUS HYPOLEUCUS, *Gould.*

One male and one female, Palm Island; one male, Cape York; one young female, Cape Grenville.

### 24.—CAMPEPHAGA KARU, *Lesson.*

One male and one female, Palm Island; one male and three females, Cape York.

### 25.—PACHYCEPHALA MELANURA, *Gould.*

Six males and three females, Cape Grenville; two males, Darnley Island; one female, Long Island; one female, Bet Island.

This species frequents the dense brushes and mangroves, and was observed upon all the wooded Islands visited in Torres Straits.

The female appears to be unknown to Mr. Gould, a description is therefore given. The female has the head and neck slaty grey; back, upper tail coverts, and the basal half of the tail, dark olive-green; apical half black, tipped with brown, circle surrounding the eye, light brown; throat dull white, freckled with grey; chest dark brown; the remainder of the under surface, and under tail coverts, deep yellow lightly washed with buff; basal half of the bill dark brown, becoming almost black towards the tip; legs and feet bluish lead colour; irides brown. Total length, 6· inches; wing, 3·35; tail, 2·7; tarsi, 0·9; bill from forehead, 0·65; bill from gape, 0.8.

In his Handbook, Mr. Gould says:—"Whenever this sex is collected it will be found to bear a very general resemblance to the females of *P. gutturalis*, and *P. glaucura*."

I thought a description would be acceptable, as it is so totally different from either.

This species appears to have a pretty wide range; we first fell in with it at Cape Grenville, afterwards at Cape York, and throughout all the wooded Islands in Torres Straits.

### 26.—PACHYCEPHELA ROBUSTA. *N. Sp.*

All the upper surface slaty grey, gradually passing into olive green, the green becoming more distinct on the rump and upper tail coverts; throat lightish grey, almost white, each feather with a transverse line of a darker colour; chest brown, slightly tinted with yellow; abdomen, flanks, and under tail coverts, pale yellow, lightly washed with buff; primaries blackish brown, margined on their outer webs with light grey; secondaries of the same colour, margined with rufous; tail above olive green, beneath of a lighter hue, and showing indistinct wavy transverse fasciæ; bill dark brown; legs and feet blackish brown. Total length, 6·8 inches; wing, 3·4; tail, 2·8; tarsi, 0·9; bill from forehead, 0·75.

This bird bears a very general resemblance to the female of *P. melanura*, but it is altogether a much larger and more robust species, and the bill is also very much larger.

One female, shot at Cape York in a dense mangrove swamp, and the only one seen.

### 27.—COLLURICINCLA SUPERCILIOSA (male). *N. Sp.*

All the upper surface slaty grey; lores, a broad line extending from the nostrils and over the eye, throat, centre of the abdomen, and under tail coverts, white; feathers of the throat with a dark line down their centres; under tail coverts slightly washed with brown; breast grey; flanks rather lighter. and tinged with rufous; wings brown, margined with grey; tail grey; shafts of the feathers brown above, white beneath; bill black; legs and feet bluish black; irides very dark hazel. Total length, 9·9 inches, wing, 5; tail, 4·2; tarsi, 1·2; bill from forehead, 1·1; bill from gape, 1·1.

One specimen only, of this very distinct species, was shot at Cape Grenville by Dr. James.

### 28.—COLLURICINCLA PARVULA, *Gould.*

Six males and one female, Cape York; one female, Cape Grenville; one male and two females, Palm Island.

### 29.—CHIBIA BRACTEATA, *Gould.*

Two males, Palm Island; one male, Brook Island.

Common at both places, and throughout all the wooded Islands in Torres Straits.

### 30.—MANUCODIA GOULDI, *G. R. Gray.*

Two males, one female, and three young, Cape York.

A very noisy bird, and pretty plentiful in the brushes about Somerset.

### 31.—RHIPIDURA RUFIFRONS, *Latham.*

One male and two females, Cape York.

Frequents the brushes, and is far from being common.

### 32.—RHIPIDURA ISURA, *Gould.*

One young female, Gulf of Carpentaria. Obtained from Mr. Broadbent.

### 33.—PIEZORHYNCHUS NITIDUS, *Gould.*

Four males and four females, Cape York; one female, Dungeness Island; one female, Long Island.

Inhabits the dense mangroves and thickets.

### 34—ARSES KAUPI, *Gould.*

One male, Cape York. The only one seen.

### 35.—MYIAGRA PLUMBEA, *Vigors and Horsfield.*

One male, Percy Island No. 2; one female, Albany Island; two males and one female, Darnley Island; three males, one young male, and one female, Cape York.

### 36.—MYIAGRA LATIROSTRIS, *Gould.*

One female, Cape Grenville; one male, Long Island; two males and two females, Cape York.

Inhabits the dense mangroves, is rare, and difficult to obtain.

### 37.—MACHÆRIRHYNCHUS FLAVIVENTER, *Gould.*

One male and one female, Cape York.

### 38.—MICRŒCA ASSIMILIS, *Gould.*

One male, Gulf of Carpentaria. Obtained from Mr. Broadbent.

### 39.—MICRŒCA FLAVIGASTER, *Gould.*

One male and one female, Dungeness Island; one female, Long Island.

Rare, and inhabits thickets.

### 40.—MONARCHA TRIVIRGATA, *Temminck.*

One male, Palm Island.

### 41.—MONARCHA ALBIVENTRIS, *Gould.*

Three males, three females, and five young in different stages of plumage, Cape York; two males, one female, and one young, Darnley Island; two males, one female, and one young, Sue Island; one male, Cape Grenville.

Common at Cape York, and all through the Islands in Torres Straits.

### 42.—GERYGONE PERSONATA, *Gould.*

Three males, one young male, and three females, Cape York.

The female differs from the male by having all the under surface yellow, and in wanting the black markings about the head.

### 43.—GERYGONE SIMPLEX, *N. Sp.*

All the upper surface, and ear coverts, light brown; lores, and a spot behind the eye, blackish brown; a line from the nostrils over the eye, a spot beneath the eye, throat, centre of abdomen, and under tail coverts white; sides of the chest light grey; remainder of the under surface of a very light buffy white; primaries and secondaries dark or blackish brown, margined with light grey; tail above, for two-thirds of its distance from the base, black, the two central feathers dark brown; the outer feathers with a part of the external, and a large patch not quite reaching the extreme tip of the internal webs, white; the remainder of the tail feathers with a patch of white on their inner webs, this patch gradually diminishing in size towards the two central ones; beneath the tail the black becomes much paler, and is crossed by four or five transverse wavy fasciæ; bill, and feet, black. Total length, 3·9; wing, 2·1; tail, 1·6; tarsi, 0·65; bill from forehead, 0·5; from gape, 0·55.

One male and one female, Gulf of Carpentaria. From Mr. Broadbent.

This species can be readily distinguished from *G. magnirostris* (its nearest ally) by the white line from the nostrils over the eye, by the large white patches in the tail, and by the under mandible being jet black, and not pearl-white at the base.

The sexes are alike in plumage.

### 44 —DRYMODES SUPERCILIARIS, *Gould.*

One male, Cape York.

### 45.—EOPSALTRIA LEUCURA, *Gould.*

Two males, Cape Grenville; two males and one female, Cape York.

Frequents the dense mangrove swamps, very rare, and difficult to obtain.

### 46.—MALURUS AMABILIS, *Gould.*

*Malurus hypoleucos, Gould.*

Three males and three females, Cape York.

Mr. Gould described the female of *amabilis* as a distinct species, under the name of *hypoleucos*. I had ample opportunities of observing them at Cape York, and pronounce them as identical without the slightest hesitation.

### 47.—MALURUS CRUENTATUS, *Gould.*

One male, Cape York; one male and one female, Gulf of Carpentaria. From Mr. Broadbent.

### 48.—MALURUS LAMBERTI, *Vigors and Horsfield.*

One male and one female, Gulf of Carpentaria. Obtained from Mr. Broadbent.

This may, perhaps, prove to be a distinct species, as it differs slightly in hue from Sydney specimens; for the present I look upon it as a local variety.

### 49.—CISTICOLA LINEOCAPILLA, *Gould.*

One male, Gulf of Carpentaria. From Mr. Broadbent.

### 50.—SERICORNIS BRUNNEOPYGIUS, *N. Sp.*

All the upper surface very dark brown, becoming rufous on the rump, and upper tail coverts, tail, lores, and ear coverts, dark brown; a line commencing at the nostrils, and passing over the eye, and a line beneath the eye white; centre of the forehead and a narrow line passing over the white, black; throat dull white, slightly striated with blackish brown; sides of the chest light brown; the under surface, and under tail coverts buffy white; wings and tail dark brown, inclining to rufous; spurious wing coverts black, largely tipped with white; bill brown above, lighter beneath; legs and feet flesh colour. Total length of male, 4·4; wing, 2·45; tail, 1.75; tarsi. 0·75; bill from forehead, 0.6; from gape, 0·65.

The female is rather smaller than the male, and the black and white markings of the head are less distinct,

This species can be readily distinguished from *S. lævigaster*, by the uniform colour of the tail.

Four males and three females, Cape York.

Common in the brushes about Cape York, where it has evidently been overlooked by previous collectors.

### 51.—BATHILDA RUFICAUDA, *Gould*

Two males, Gulf of Carpentaria. Obtained from Mr. Broadbent.

### 52.—DONACOLA CASTANEOTHORAX, *Gould.*

One young, Cape York.

Very common about the settlement at Somerset. No finches were seen upon any of the islands in Torres Straits.

### 53.—PITTA STREPITANS, *Temminck*

One female, Palm Island.

This is the most northern locality, I believe, that this species has been obtained.

### 54.—PITTA SIMILLIMA, *Gould*

One male and one female, Bet Island.

### 55.—MIMETA AFFINIS, *Gould.*

One male and five females, Cape York; one female, Cape Grenville; one female, Sue Island.

### 56.—MIMETA FLAVOCINCTA, *Vigors and Horsfield.*

Two males and one female, Cape Grenville; seven males and nine females, Cape York. The young are much brighter in colour than the adults. Very common in the brushes about Cape York.

### 57.—SPHECOTHERES FLAVIVENTRIS, *Gould.*

One female, Palm Island; ten males, two young males, and four females, Cape York.

### 58.—CORVUS AUSTRALIS, *Gmelin.*

One male, Percy Island, No. 2.

### 59.—CALORNIS METALLICA, *Gould.*

Five males and two females, Cape York.

### 60.—GLYCIPHILA SUBFASCIATA, *Ramsay*.

Five males and four females, Cape York.

### 61.—STIGMATOPS OCULARIS, *Gould*.

One male, Cape Grenville.

### 62.—PTILOTIS VERSICOLOR, *Gould*.

Four males and four females, Cape Grenville; one female, Barrow Island; one male and one female, Long Island; three males and one female, Dungeness Island.

### 63.—PTILOTIS FILIGERA, *Gould*.

Six males and six females, Cape York.

### 64.—PTILOTIS NOTATA, *Gould*.

Three males and five females, Cape York; two males and one female, Cape Grenville; one male and two females, Darnley Island.

Common at Cape York, all the wooded island in Torres Straits, and New Guinea.

### 65.—CONOPHILA RUFIGULARIS, *Gould*.

One female, Gulf of Carpentaria. Obtained from Mr. Broadbent.

### 66.—TROPIDORHYNCHUS BUCEROIDES, *Swainson*.

One male and one female, Palm Islands; one female, Cape Grenville; four males, and one female, Cape York.

### 67.—MYZOMELA ERYTHROCEPHALA, *Gould*.

Six males and two females, Cape York; six males and one female, Long Island; one young male, Warrior Island.

During the month of June this pretty species was very numerous about Cape York, where it frequented the high mangroves; it also appeared to be very common throughout the islands in Torres Straits.

### 68.—MYZOMELA PECTORALIS, *Gould*.

One male, Cape York.

### 69.—MYZOMELA OBSCURA, *Gould.*

Three males and two females, Cape York.

### 70.—MELITHREPTUS ALBOGULARIS, *Gould.*

Two males and one female, Cape York.

### 71.—DICÆUM HIRUNDINACEUM, *Latham.*

Three males, Cape York.

### 72.—NECTARINIA AUSTRALIS, *Gould.*

One male, Palm Island; four males and one female, Cape Grenville; one female, Albany Island; one male and one female, Cape York; three males and one female, Sue Island; one male, Warrior Island.

### 73.—ZOSTEROPS RAMSAYI, (male) *N. Sp.*

Crown of the head, neck, throat, wings, rump, and under tail coverts, greenish yellow; lores, and a line beneath the eye black; back and chest, bluish grey; abdomen light grey, passing into very light buff on the flanks; eyes surrounded by a very large zone of white feathers; primaries and secondaries, brownish black, margined on their outer webs with yellow; beneath, on their inner webs, with white; tail, brown, margined with yellow; legs and feet, bluish grey; upper mandible, brownish black; under mandible, horn colour; irides, brown. Total length, 4·4; wing, 2·4; tail, 1·75; tarsi, 0·65; bill from forehead, 0·5; from gape, 0·6.

Two specimens of this very fine and distinct species were shot by Spalding and myself, on Palm Island; although they appeared to be tolerably numerous, we found it very difficult to obtain specimens, as they frequented the highest trees in the dense scrubs. The very large zone of white feathers surrounding the eye, will always serve to distinguish this from all other Australian species.

I name this species after Edward P. Ramsay, Esq., F.L.S., Curator of the Sydney Museum.

### 74.—ZOSTEROPS FLAVOGULARIS (male), *N. Sp.*

All the upper surface dull greenish yellow; lores, and a line beneath the eye black; eyes surrounded by a narrow zone of white feathers; forehead, throat, and under tail coverts, bright yellow; chest, very light grey; abdomen of a lighter colour, and with a streak of pale yellow down the centre.; flanks, light buff, darker in the male; primaries brown, margined for two thirds of their length with yellow, and becoming whitish towards the tips; legs and feet, bluish grey; upper mandible, black; lower black at the tip; lighter at the base; irides, dark brown. Total length, 4·65; wing, 2·3; tail, 1·9; tarsi, 0·7; bill from forehead, 0.5; from gape, 0·57

One male and one female, Cape Grenville; five males and three females, Sue Island; one female, Bet Island; one female, Warrior Island; one male, Darnley Island; common at Cape Grenville, and throughout all the wooded islands in Torres Straits.

This species can be readily distinguished from *Z. luteus*, by its pale under surface.

### 75.—PTILORHIS VICTORIÆ, *Gould.*

One adult male, one young male, and one female, Barnard Isles.

### 76.—CRASPEDOPHORA MAGNIFICA, *Vigors.*

One adult male, one young male, and three females, not fully adult, Cape York.

### 77.—MESOCALIUS OSCULANS, *Gould.*

One female, Gulf of Carpentaria. From Mr. Broadbent.

### 78.—LAMPROCOCCYX MINUTILLUS, *Gould.*

One female, Cocoanut Island.

### 79.—CENTROPUS MACROURUS, *Gould.*

One male and one female, Palm Island; one male, Albany Island; two females, Gulf of Carpentaria. Obtained from Mr. Broadbent.

### 80.—CACATUA GALERITA, *Latham.*

One male, Fitzroy Island.

81.—CACATUA SANGUINEA, *Gould.*

Two males, Gulf of Carpentaria. Obtained from Mr. Broadbent.

82.—CALYPTORHYNCHUS MACRORHYNCHUS, *Gould.*

One male and one female, Gulf of Carpentaria. Obtained from Mr. Broadbent.

83.—MICROGLOSSUM ATERRIMUM, *Gmelin.*

One male, Cape York.

84.—TRICHOGLOSSUS MULTICOLOR, *Gmelin.*

One female, Palm Island; four males and four females, Cape York.

85.—PTILINOPUS SWAINSONII, *Gould.*

One male, Cape Grenville; three males and three females, Cape York; one female, and one young, Sue Island; one male, Darnley Island.

Common throughout all the wooded Islands in Torres Straits.

86.—MEGALOPREPIA ASSIMILIS, *Gould.*

One male and two females, Cape York.

87.—LEUCOMELÆNA NORFOLCIENSIS, *Latham.*

One female, Palm Island.

88.—MYRISTICIVORA SPILLORRHOA, *G. R. Gray.*

Two males and two females, Bet Island.

89.—LOPHOLAIMUS ANTARCTICUS, *Shaw.*

One male and one female, Cape York.

Scores of this Pigeon were shot at Cape York. They are less in size and weight than those obtained in N. S. Wales, and the plumage is not nearly so bright. I consider them as a very distinct local variety.

90.—CHALCOPHAPS LONGIROSTRIS, *Gould.*

One male, Cape York.

This I look upon as a very doubtful species.

### 91.—ERYTHRAUCHÆNA HUMERALIS, *Temminck.*

Two females, Palm Island; one young, Cape Grenville; two females, Sue Island.

Very widely distributed, and seen at nearly every place visited, New Guinea included.

### 92.—STICTOPELIA CUNEATA, *Latham.*

One young, Gulf of Carpentaria.

Obtained from Mr. Broadbent.

### 93.—MEGAPODIUS TUMULUS, *Gould.*

One male and one female, Brook Island.

### 94.—MEGAPODIUS ASSIMILIS, (female) *N. Sp.*

Head and crest very dark brown; the latter tipped with grey; neck and all the under surface slaty grey; back, wings, tail, flanks, and under tail coverts, dark chocolate brown; bill reddish brown, becoming lighter on the sides and tip; legs, dull red; feet of the same colour, gradually becoming black towards the claw; claw very long and slender. Total length, 13·5; wing, 9·2; tail, 3·8; tarsi, 2·1; middle toe without the claw, 1·6; bill from forehead, 1·0; from gape, 1·15.

One adult and one young female, Dungeness Island; one female, Bet Island.

This bird is very nearly allied to ***M. tumulus***, but is altogether of a very much smaller size, the legs and feet are also very weak in comparison to that species.

It is found on many of the low lying islands in Torres Straits, and is not uncommon.

### 95.—TURNIX PYRRHOTHORAX, *Gould*

One female, Cape York; one male, Sue Island; one male and one female, Darnley Island.

### 96.—ŒDICNEMUS GRALLARIUS, *Latham.*

One female, Percy Island, No. 2.

### 97.—ESACUS MAGNIROSTRIS, *Geoffroy.*

One female, Cape Grenville; one male, Long Island.

### 98.—HÆMATOPUS LONGIROSTRIS, *Vieillot*

Two females, Cape Grenville; two males and two females, Cocoanut Island.

Common everywhere. On Cocoanut Island out of a flock of twenty I succeeded in killing four at one shot.

### 99—HÆMATOPUS FULIGINOSUS, *Gould.*

One male, Palm Island.

### 100.—CHARADRIUS ORIENTALIS, *Schlegel.*

One male, Cocoanut Island; one female, Cape Grenville; two females, Bet Island.

On Cocoanut Island this species was very numerous, the one obtained from there being a very fine old male, in full summer plumage.

### 101.—OCHTHODROMUS INORNATUS, *Gould.*

One male, Cape York; two females, Sue Island.

### 102.—OCHTHODROMUS BICINCTUS, *Jardine and Selby.*

One female, Cape Grenville; three females, Cape York; one male and five females, Sue Island.

All of the above in winter plumage.

### 103.—LIMOSA UROPYGIALIS, *Gould.*

One male and one female, Cape York; one male, Bet Island.

### 104.—ACTODROMAS AUSTRALIS, *Cuvier.*

One male and four females, Cape York; two females, Sue Island; one male and one female, Darnley Island.

The male from Darnley Island is in full summer plumage, all the others are without the slightest trace of the rufous markings.

### 105.—TRINGA TENUIROSTRIS, *Horsfield.*

Seven females, Sue Island; one female, Cocoanut Island.

The specimens obtained vary considerably in their markings, some being much darker and more spotted than others. Very common on all the low lying islands in Torres Straits.

### 106.—ACTITIS HYPOLEUCOS, *Linneus.*

One male and one female, Cape York.

Frequents the salt-water creeks, and far from common.

### 107.—GLOTTIS GLOTTOIDES, *Vigors,*

One female, Cape Grenville.

### 108.—GAMBETTA PULVERULENTUS, *Muller.*

One female, Cape Grenville; one female, Bet Island; four males and two females, Sue Island; four females, Cocoanut Island.

Seen in large flocks on all the reefs and islands, from Cape York to New Guinea.

### 109.—NUMENIUS UROPYGIALIS, *Gould.*

One female, Cape Grenville; one male, Cape York; one female Sue Island; three females, Bet Island; one male, Long Island; one female, Darnley Island.

### 110.—NUMENIUS MINOR, *Muller.*

One male, Cape York.

### 111.—ARDEA NOVÆ HOLLANDIÆ, *Latham.*

One female, Evan's Bay, Cape York.

### 112.—DEMIEGRETTA JUGULARIS, *Forster.*

One female, Fitzroy Island.

### 113.—DEMIEGRETTA GREYI, *Gould.*

Two males and one female, Low Island, Trinity Bay.

This and the preceding, are undoubtedly the same species, and always associate together. Sometimes two of the white may be seen together; at other times two of the blue; but, as a rule, it is one of each colour. One specimen obtained (a fine old male) of the white variety, is blotched all over with blue. I also saw one half blue and white. The colour is not a sexual difference, as adults of both sexes and colours are easily obtained.

### 114.—NYCTICORAX CALEDONICUS, *Latham.*

Young male, Darnley Island.

### 115.—BUTOROIDES JAVANICA, *Horsfield.*

Two females, Cape York ; one male and one female, Cape Grenville ; one male and one female, Dungeness Island.

### 116.—BRUCHIGAVIA GOULDI, *Bonaparte.*

One female, Palm Island; two males, Cape Grenville; one male and two females, Sue Island; one young, Torres Straits.

First seen at Palm Island ; common about Cape York, and all through Torres Straits, to Darnley Island.

### 117.—SYLOCHELIDON CASPIA, *Pallas.*

One male and one female, Barrow Island.

### 118.—THALASSEUS CRISTATUS, *Stephens.*

Two males, Palm Island ; one male, Barrow Island ; one young male, Fitzroy Island ; one young, Cape Grenville ; one young and one female, Turtle Reef.

### 119.—THALASSEUS BENGALENSIS, *Lesson.*

One male and three females, Sue Island ; two young males. Dungeness Island ; one female, Bramble Cay.

Common upon every reef and island throughout Torres Straits.

### 120—STERNA MELANAUCHEN, *Temminck.*

Six males and one female, Mud Bay, Cape York.

### 121.—STERNA MELANORHYNCHA, *Gould.*

One female, Warrior Reef.

### 122.—STERNA NIGRIFONS (female). *N. Sp.*

Head and neck above, and the outer web of the external primary, jet black ; remainder of the upper surface, wings, and tail, light silvery grey ; throat and all the under surface white, with a beautiful roseate tint ; three first primaries with a line of dull black on their inner webs next the shaft ; bill, black ; legs and feet, red ; nails, black. Total length, without bill, to central tail feathers, 9 inches ; to outer tail feathers, 12·2 ; wing, 8·7 ; tail to centre feathers, 2·6 ; to outer, 6·1 ; tarsi, 0·8 ; bill, from forehead, 1·6 ; from anterior margin of nostril, 1·2 ; from gape 2.

This beautiful tern is very nearly allied to *Sterna paradisea,* but differs in having the bill entirely black, instead of yellow at the base and gape, and in having the external web of the first primary black.

Seen in great numbers about Warrior Reef, in company with larger terns and noddies.*

### 123.—STERNULA PLACENS, *Gould.*

One male, Sue Island.

### 124.—STERNULA INCONSPICUA, *N. Sp.*

Forehead and line over the eye white; a narrow line of black extends from lores over the eyelids; central portion of the crown white, mottled with black, becoming black on the nape and hind neck ; all the upper surface light grey, with a darker patch running back from the shoulders ; primaries blackish brown on the outer and inner webs next the shaft ; secondaries grey margined with white ; tail white, slightly washed with grey ; bill of a brownish black, lighter at the sides and gape ; legs and feet dark brown ; irides black. Total length (without bill) to central tail feathers, 6·5 ; to outer tail feathers, 7·7 ; wing, 7· ; tail to centre feathers, 1·9 ; to outer, 3·15 ; tarsi, 0·6 ; bill from forehead, 1·25 ; from anterior margin of nostril 0·9 ; from gape, 1·6.

One male and four females, Mud Bay, Cape York. In company with *Sterna melanauchen and Thalasseus cristatus.*

### 125.—ONYCHOPRION FULIGINOSA, *Gmelin.*

Six males and four females, Bramble Cay.

### 126.—ANOUS STOLIDUS, *Latham.*

One male and one female, Cape Grenville ; one male and two females, Bramble Cay ; three males and four females. Caught on board off Bramble Cay.

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* A specimen of this species is in the possession of Mr. Waller, and was shot by him in Moreton Bay.

### 127.—ANOUS MELANOPS, *Gould.*

Three males, and three young, Bramble Cay.

On Bramble Cay this species was in countless thousands. To give some idea of their numbers, I may state, that from one discharge of the gun I killed forty-six, and there appeared to be quite as many wounded.

### 128.—ANOUS LEUCOCAPILLUS, *Gould.*

One male and one female, Nepean Island.

### 129.—DIOMEDEA MELANOPHRYS, *Temminck.*

One male and one female, East Coast.

### 130.—PTERODROMA MACROPTERA, *Smith.*

One young male, East Coast.

### 131.—FREGETTA MELANOGASTER, *Gould.*

One male and three females, East Coast.

### 132.—OCEANITES OCEANICA, *Kuhl.*

Seven males and three females. Shot at sea, in the latitude of Port Bowen.

### 133.—TACHYPETES AQUILA, *Linneus.*

Four males and three females, Torres Straits.

### 134.—TACHYPETES MINOR, *Gmelin.*

One male, Torres Straits.

### 135.—SULA CYANOPS, *Sundevall.*

One male, Bramble Cay.

### 136—SULA FIBER, *Linneus.*

One male, three females, and two young, Bramble Cay.

Seen from the latitude of Moreton Bay to New Guinea.

Mr. E. P. Ramsay, F.L.S., &c., read the following papers:—

## Description of a new species of *Pachycephala* from Fiji, in the collection of Wm. Macleay, Esq., F.L.S.

### PACHYCEPHALA KANDAVENSIS.—*Sp. Nov.*

*Adult male*—The whole of the head, earcoverts, and a narrow cresentic band, widest on the sides, and extending across the chest from the lower earcoverts, jet black; a narrow collar round the back, widest on the sides of the neck, and a patch joining it to the chest, bright yellow; the throat, inside the black pectoral band, pure white; the breast and remainder of the under surface, bright gamboge yellow, of a slightly deeper and duller tint on the abdomen and under tail-coverts; under surface of the wings dark brown, the margins of the inner webs of the quills towards the base, buffy-white; the under wing-coverts white tinged with-yellow; interscapular region, back, and remainder of the upper surface yellowish olive; wings blackish-brown, the coverts and scapulars broadly, and the quills narrowly margined with yellowish olive; tail dark brown above, paler below, the centre two feathers and outer webs of the remainder tinged with olive yellow; bill black; legs greyish brown; iris reddish brown. Total length (*exclusive of bill*), 5·5 inches; wing, 3·5; tarsus, 1 inch; tail, 2·6; bill from forehead, 0·7; from nostril, 0·4; from gape, 0·8.

The male of this species may be recognised by the *narrow line of black* across the *lower part* of the chest, and by its being of a nearly even width throughout; or, if anything, wider on the sides than in the centre of the chest, and by the large extent of white on the throat.

*Female* (*Not quite adult**)—Above, olive brown, slightly tinged with olive yellow; wings and tail blackish brown; the upper wing-coverts and inner second-aries broadly margined and tipped with rich cinnamon or rufous-brown, the remainder of the quills narrowly margined on the outer webs with the same colour; a few feathers of the upper tail-coverts, cinnamon brown; the head, dark brown, washed with cinnamon; sides of the head, an ill-defined line over the eye; the ear-coverts and sides of the neck, the throat, and all the under-surface, cinnamon brown, a little paler on the throat; under-surface of the wings, brown, the inner webs of the feathers towards the base, whitish; under wing-coverts whitish; margins of the wings below, tinged with cinnamon; tail below dark brown, ; the tips of the feathers tinged with cinnamon; bill dark brown paler at the base of the lower mandible; legs and feet, light brown; iris, reddish brown. Total length, 5·5 inches; wing, 3·2; tail, 2·6; tarsus, 1 inch; bill, from forehead, 0·65; from nostril, 0·4; from gape, 0·8.

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* Shot from the nest, which contained one egg.

This species was found at "Kandavu," frequenting the thickets on the sides of the ranges; it was observed breeding during the months of September and October, making a small round open nest of grasses and rootlets, lined with finer material of the same nature.

The only egg procured was taken from a nest, which contained but one, and placed within four feet of the ground in a low bough. The egg is white, blotched largely at the thicker end with jet black, and large irregular shaped blotches of slate colour, which appear beneath the shell; a few dots of black are scattered over the thin end; length, 1 inch; in breadth, 0·73.

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Description of a supposed new species of *Pachycephala*, from New Britain, proposed to be called—

### PACHYCEPHALA CITREOGASTER.—*Sp. Nov.*

*Adult female.*—All the upper parts of the head, wings, and tail, rich brown—inclining to rufous brown on the ear-coverts, sides of the face and neck; and on the shafts and outer webs of the quills, tips of the upper wing coverts, and scapulars; inner webs of the quills blackish-brown; all the under-surface whitish; the feathers on the throat and upper part of the chest margined with brown giving to these parts a burred appearance; sides of the breast and the flanks tinged with brown, the abdomen inclining to citron-colour, and deepening into citron-yellow about the vent and under under-tail coverts; under surface of the wings and tail light brown ; under wing coverts whitish, outer series tinged with brown; bill, black ; legs and feet, brown. Total length, 6 inches ; wing, 3·35 ; tail, 2·8 ; tarsus bill from forehead, 0·7 ; from the gape, 0·9 ; from nostril, 0·4 ; width and height at nostril, 0·2.

*Hab.*—New Britain and adjacent islands.

This description has been taken from a spirit specimen, one of a collection of birds, obtained by Captain Ferguson in 1870, at New Britain and the adjacent Islands.

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I exhibit also from the same collection of birds above mentioned, which has now been in spirits over five years, two or three very interesting specimens of parrots, including the beautiful *Lorius chlorocercus, Domicella cardinalis* and the miniature *Nasiterna pusio*, the smallest species of parrot known, its total length being about 3¼ inches.

This curious little bird has character which appear to link it, from the form of its feet and bill, with some of the largest of the group of parrots—the Cockatoos (*Cacatuinæ*) ; on examination, its sternum however does not show any affinity to that group, but rather places it, from the absence of the furcula, among the *Pezoporinæ.* On the whole, its characters are so anomalous that it is difficult to decide what family, among the Psittacidæ, it should be most properly placed ; and only by a close comparison and examination of its entire skeleton, can this be decided. I am inclined to think it will eventually be placed in a separate family. The peculiar formation of the tail feathers, the bare shafts of which being produced into spines at the tips, I believe, is not found in any other known genus of parrots. When we know something of the habits of this species it will probably be found to be strictly arboreal, and confined to the dense scrubs, where it could find abundance of food without extensive flight, for which its wings are not adapted; the contents of the crop appeared to be portions of fruit ; the gizzard contained minute grains of sand and a few seeds, from which one might suppose it to be of terrestrial habits; the absence of the *os furculum* would also warrant this opinion.

## Description of a new species of the genus LAMPROLIA, *Finsch*; from Fiji.

### LAMPROLIA KLINESMITHI, *Sp. Nov.*

*Adult Male*—The whole of the upper and under surface of the body and of the wings, and the under tail-coverts, velvety shining-black, glossed with a rich metallic steel-blue lustre, except on the lower part of the abdomen, and under surface of the tail and wings, and on the upper surface of the primaries and inner portion of the secondaries. The marginal half of the outer webs of the secondaries, fringe-like and open, and glossed with steel blue; the two centre tail feathers and the outer webs of the remainder, except the outermost on either side, similarly fringed; the tip of the feathers on the lower part of the rump, and the whole of the upper tail-coverts glistening silky-white, the centre two tail feathers slightly shorter than the next on either side, silky-white, with a small bracket-shaped mark of glossy-black margining the tip, the next on either side more largely tipped with black, which extends above half-way down the margin only of the inner web, the remainder of the feathers similarly marked, the black increasing and extending along the outer margins of both webs, the white decreasing, until on the outermost feather on either side it is reduced to a small triangular white spot near the base, the remaining portion of the feather being black, with a purple gloss on the outer web; bill, legs and feet black; iris, dark brown. Total length, 3·75 inches; wing, 2·7; tail, 1·8; tarsus, 0.73; bill from the forehead, 0·5; from gape, 0·65; from nostril, 0·4.

*Habitat.*, *Vanua Levu, Fiji.*—Confined to the mountains, in scrubs.

Ornithologists will, I am sure, congratulate Mr. Klinesmith, of Levuka, on the discovery of this very beautiful and interesting bird; the second of this remarkable genus which his exertions have made known to science—the first, and *type* of the genus, which was described by Dr. O. Finsch, from specimens forwarded by Mr. Klinesmith, in 1873, was named *L. Victoriæ,*[*] and is, on the whole, a larger bird than the species at present under consideration; both species are remarkable for the richness and the peculiar Paradiseine form of their plumage; they resemble each other closely, but may at once be distinguished by the greater size of *L. Victoriæ*, and the greater extent of white on the rectrices of *L. Klinesmithi*, in which latter species the white extends over the whole of the centre two tail-feathers, except a narrow margin at the extreme tip. *Lamprolia Victoriæ* (*Finsch*) is found on Taviuni, the present species on Vanua Levu, an adjacent and one of the largest islands of the Fiji group. Respecting its habitat, Mr. Klinesmith remarks: "They live in the interior part of the country, and only in certain spots in the high but damp ranges; in dry and rocky parts they are not seen at all." "They are very scarce, and extremely hard to find"; their "stomachs contained insects."

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[*] P. Z. Soc., Lon., 1873, Pt. III, p. 735.

I have named this new bird after its discoverer, to whom we are indebted for the knowledge of at least two of the most beautiful and remarkable birds yet discovered in Fiji, and I doubt not that his researches will bring to light many more new and beautiful acquisitions.

Mr. Ramsay exhibited specimens of most of the birds described in these papers; also some beautifully prepared skins of birds from the collection obtained in New Britain, before mentioned.

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Mr. E. Pierson Ramsay on the avifanna of Fiji—

### Remarks on a Collection of Birds lately received from Fiji, and now forming part of the Macleayan Collection, at Elizabeth Bay; with a list of all the Species at present known to inhabit the Fiji Islands—by E. P. Ramsay, F.L.S., &c., &c.

1.—Astur rufitorques, *Peale, U.S. Expl. Expd. pl.* 2 *f.* 2.

This appears to be the commonest species, and is found throughout the group.

2.—COLOCALIA SPODIOPYGIA, *Peale, U.S. Expl. Expd. pl.* 49 *fig*. 5.

Cypselus terræ-reginæ, *Ramsay, P Z. S*, 1874 pt. IV.

This species has a very extended range, being found dispersed over the whole of the South Sea Islands, and as far north as the north-east coast of Queensland where I obtained specimens in 1874. The Queensland birds have the bill a little larger and stronger, but do not appear to differ much in any other respects. The eggs are three or four in number snow white, in length 0·7 inch by 0·5 in width. The birds breed during October and November.

3.—TODIRAMPHUS VITIENSIS, *Peale.*

One of the most common species in Fiji, probably only a variety of T. (*Halcyon*) SACRA.

4.—MYZOMELA JUGULARIS, *Peale.*

The specimens from Kandavu, of this pretty species, I find to be more highly coloured than those from other localities, the crimson on the head moreover, is of a greater extent.

5.—PTILOTIS PROVOCATOR, *E. L. Layard, P Z.S.*, 1875, *pt. I. p.* 28.

Common at Kandavu.

6.—PTILOTIS CARUNCUTATA, *Forst; Finsch and Hartl. Cent. Polynes. t.* 5 *fig.* 28.

This specimen is a young bird obtained at the Island of Fortuna.

7.—ZOSTEROPS CÆRULESCENS, *Lath.*
*Gould Birds of Austr. IV. pl.* 31.

I have examined the Fiji specimens carefully, and compared it with a large series from various parts of Australia, it differs *only* in having a slightly larger and stronger bill, with the culmen a little more arched and in the tail being longer. In plumage the specimen from Kandavu and the N. S. Wales birds are nearly ***exactly alike***, but the yellow on the throat extends a little further down than in the generality of the N. S. Wales' specimens, and the olive yellow on the back of the neck is of greater extent and ends further down than opposite the yellow of the throat. I do not consider these differences sufficient for the foundation of a separate species, but this variety, if not identical with *Z. flaviceps*, may be distinguished under the name of kandavensis.

Var. *kandavensis.—Adult*: Plumage same as in *Z. cœrulescens*, but the yellow from throat extending slightly on to the chest, the tail is much longer, bill horn-brown; legs light brown. Total length, 4·2 inches; tail, 2; wing 2·35; tarsus 0·7; bill, from forehead 0·5; from gape 0·55; from nostril 0·3.

Mr. E. L. Layard, F.Z.S., H. B. M. Consul at Levuka, mentions in the Proceedings of the Zooloogical Society (P. Z. S., 1875, pt. I p. 29), another species of *Zosterops* found at Kandavu, but which he had not had an opportunity of describing; he proposed for it the name of *Z. explorator*, and states it may be distinguished from *Z. flaviceps* of Peale, "by being yellow from the chin to the abdomen, and without the ash colour collar." I regret to say I have not seen a specimen of *Z. flaviceps* nor can I find any description of it in any of the Works at my disposal.

8.—VITIA RUFICAPILLA, *Ramsay, P. Linn. Soc. N.S.W.*, 1875,
For description and remarks. See *ante* page 42.

### 9.—PETROICA PUSILLA, *Peale.*

The Kandavu variety of this species has the white cap on the head of a greater extent, and the crimson of a brighter tint. The features are on the whole more distinct than in the usual forms of *P. pusilla.*

### 10.—ARTAMUS MENTALIS, *Jard.*

*Artamus vitiensis* is merely a variety of this species. The birds are not rare, and are usually found in the more open parts of the forest.

### 11.—MYIAGRA RUFIVENTRIS, *Elliott.*

Two specimens of this well marked species are all that were obtained, it does not appear to be a common bird.

### 12. MUSCYLVA LESSONI, *G. R. Gray.*

This is a very common species throughout the Fiji group. Its habits and actions resemble those of our brown flycatcher, *Micrœca fascinans.*

### (13.—RHIPIDURA PERSONATA, *Ramsay, P. Linn. Soc. N.S.W.*)

For description and remarks. See *ante* page 43.

### 14.—CAMPEPHAGA MACULOSA, *Peale.*

Two specimens only obtained, one stated to be a male but probably a female, it is not quite adult, the locality marked on the label attached, is "Batiki", Fiji. The second specimen is evidently an adult male, has the throat, chest, and breast pure white, with only slight remains of cross-bars on the feathers on sides of the chest and neck; in size it is slightly smaller. This species is probably identical with *Lalage terat* (*Cass*) *and L. orientalis* (*Hartlb*).

### 15.—MYIOLESLES VITIENSIS, *Hartl. Ibis,* 1866, p. 173.

This species appears to be common everywhere in the dense scrubs.

### 16.—PACHYCEPHALA VITIENSIS, *G. R. Gray.*

I can find no description of *Pachycephala vitiensis* at present, and am not quite sure that I have assigned the correct name to these specimens.

### 17.—PACHYCEPHALA KANDAVENSIS, *Ramsay, P. Linn. Soc. of N.S W.,* 1875. See *ante* page 65.

I believe this to be quite distinct from any hitherto described species, although closely allied to *P. gutturalis and P. vitiensis.*

### 18.—PACHYCEPHALA GRÆFFEI.

There are two females in the collection which agree very well with *P. optata* of Hartlaub, a synomyn of this species.

19.—MERULA RUFICEPS, *Ramsay, P. Linn. Soc. N.S.W.* See *ante* page 43.

This fine species was obtained at Kandavu to which district I believe it is confined—its habits and actions and nidification are similar to other species of Merula.

20.—APLONIS CASSINII, *Peale, U.S. Expl. Expd.* pl. 7. 1.

This is very common in Fiji and seems dispersed all over the group.

21.—AMBLYNURA PEALEI, *Hartlaub.*

Probably a local variety of A. CYANOVIRENS, *Peale.* of which *Lobiospiza notabilis* of Hartlaub and Finsch, is the young.

There are three specimens in the collection, including a young bird which has the blue and yellow carunculæ at the base of the lower mandible and round the gape well developed.

22.—PLATYCERCUS SPLENDENS, *Hartl. and Finsch.*

Only one specimen of this fine species appears to have been obtained, although the birds are by no means rare, and found throughout the group.

This species may be easily distinguished from *P. hysginus* by having a bright blue collar round the back of the neck, in some very old specimens this collar becomes at least two inches in width. I have lately examined a bird of this species, in which a streak of white was conspicuous along, and on either side of the shaft of the quills of the wings and tail feathers; the crimson of the head and under surface is much brighter in tint than in either *P. hysginus* or *P. tabuensis.*

23.—PLATYCERCUS PERSONATUS, *G. R. Gray.*

This, one of the most common species in Fiji, appears to be somewhat nocturnal in its habits. I have noticed specimens in confinement particularly drowsy during the day time, but when liberated at night, wander about the house, talking and chattering incessantly. In Fiji, they prove very destructive to the crops.

### 24.—DOMICELLA SOLITARIUS, *Latham.*

This is perhaps one of the most beautiful birds of the South Sea Islands, and appears to be very plentiful in the Fiji group, several specimens of both sexes in the collection.

### 25.—TRICHOGLOSSUS AMABILIS, *Ramsay, P. Linn. Soc., N.S.W.*

See *ante* page 36.

A beautiful little species obtained for the first time I believe, at Fiji, by Charles Pearce, 17th June last, 1875, and described at one ofour previous meetings (July 26th), after which, the description was published in the *Herald's* report of the meeting on the 28th of the month; having lately heard that the same species has been since described, I take the present opportunity of giving the exact date of my description of it.

### 26.—CUCULUS (*Cacomantis*) SIMUS, *Peale.*

*C. infuscatus* (*Juv.*), *Hartl., Ibis.* 1866, p. 172.

The collection contains both the young and adult of this species, from which it appears to me that *C. infuscatus* of *Hartl.* is merely the young; after loosing the fuscous hue of the under surface, the young birds become barred with bracket-shape and broad wavy lines of dull white, which are tinged with rufous on the throat, chest, and sides of the neck; there are also remains of pale rufous margins to the feathers on the interscapular region; on the rump and upper tail-coverts faint margins of dull white are visible. In the adult the tail becomes strongly barred, and the under surface of the body of a rufous tint. *C. simus* (*Peale*), is represented in Australia by *C. castaneiventris* of *Gould*, which is about the same in size.

### 27.—PTILINOPUS MARIÆ, *Homb. and Jacq. Voy. Pole, Sud. t.* 29, 2.

*P. perousei*; *of Hartlaub.*

This species does not appear to be rare and is known as the nutmeg dove by the letters in Fiji, the native name is Saukula.

### 28.—CHRYSÆNA LUTEOVIRENS, *Homb. and Jacq. Voy. Pole, Sud. t.* 12—1, 2.

Gouldii, *Birch*; flava, *G. R. Gray.*

Feliciæ, *Homb. and Jacq.* (*female*).

### 29.—CHRYSÆNA VICTOR, *Gould, P.Z.S.*, 1871, p. 642.

There seems to be considerable confusion in the minds of some, respecting the females of this and the foregoing species, and indeed also with respect to the males.

Mr. E. L. Layard, H.B.M. Consul at Fiji remarks in the *P. Z. Soc.*, 1875, *pt.* I. *p.* 30, as follows :—" Professor Von Suhm, of the Challenger and I, after going carefully into the subject, have come to the conclusion that the 'Orange Dove' of Savinni (Taviuni), and Lanthala (*Chrysœna victor*, Gould), is a phase of plumage of the 'Green Dove' (*C. luteovirens*)." ! ! All I can say is, that there is not the slightest probability of such being the case, as anyone looking a little deeper " into the subject" than the colouration of the plumage, would at once perceive ; the peculiar form and texture of the feathers of *C. luteovirens*, and the long plume like upper tail-coverts and extensive tail of *C. Victor*, could hardly be produced by the same species at the same period of the year, the only way I can account for Mr. Layard's strange remark is by presuming that he mistook the male of *C. viridis* for *C. luteovirens*, both of these birds having plumage of a similar texture.

### 30.—CHRYSÆNA VIRIDIS, *E. L. Layard, P Z S., pt.* II., 1875, p. 151.

This fine and very distict specimen was discovered during the cruise of the " Challenger" among the Fiji group, and subsequently obtained by Mr. E. L. Layard, at Kaudavu, who describes the male in the proceedings of the Zoological above quoted (1875, II. p. 151). The female is not unlike the same sex of *C. victor* and of *C. luteovirens*, but is at once distinguished by its short tail, and may thus be described.

*Adult female.*—The whole of the upper and under surface deep dark green, paler on the sides of the face and throat, with a yellowish tinge on the latter ; the abdomen and flanks dull pale green with greyish margins to the feathers ; central portion of the abdomen and region round the vent, dull whitish grey ; legs brown tinged with green ; under tail-coverts and a narrow line round the inner rectrices, pale yellow ; under surface of the tail, dark brown ; upper surface, deep bright green on the outer margins and tips, dull blackish towards the base of the inner webs, two centre feathers green, becoming blackish brown at the base; upper tail coverts, bright green; quills above, blackish brown, primaries margined narrowly with golden yellow, secondaries broadly with green on the outer webs; wing coverts above, green; the basal portion, blackish brown; under surface of the quills, blackish brown; the outer webs narrowly, the inner rather broadly margined with yellow; under wing coverts, brown washed with at tips and margined, with yellow; the margins of the shoulders tinged with green; bill olive green; legs and feet bluish, tinged with red. Total length, 6½ inches; wing, 4·4; tail, 2·2; tarsus, 0·85; bare portion, 0·3; bill from forehead, 0·65; from the anterior margin of nostril to tip, 0·3; from gape, 0·8.

The collection contains a fine series of the young and adults of both sexes, all obtained at Kandavu, to which place this species seems confined.

31.—CARPOPHAGA LATRANS, *Peale, U.S. Expl. Expd. pl.* 26.

32.—CARPOPHAGA (*Janthœnas*) VITIENSIS, *Quoy and Gaim, Voy. Astrol. t.* 28.

The young of this species resembles the adult generally, but is not so brightly coloured or so distinctly marked. *Adult,* cere and base of the bill, crimson; tip, horn colour; legs, crimson—iris brown.

33.—CHARADRIUS LONGIPES, *Temn.*
*C. fulvus, p.*; *Hartl. and Finsch.*

34.—LIMOSA UROPYGIALIS, *Gould, B. Aust.* VI., *pt.* 29.

This species appears to be plentiful.

35.—TOTANUS INCANUS, *Gmel.*

A very common species.

36.—ORTYGOMETRA TABUENSIS, *Gmel.*
*Porzana vitiensis, Hartl.*

Only one specimen obtained; this species seems to have an immense range of habitat being found all over Australia, Tasmania, New Zealand, and the Tropical Islands of the South Seas. Bill, black; legs and feet, yellow—iris red.

37.—ANOUS LENCOCEPHALUS, *Gould, B. Aust.* VII. *pt.* 33.

One specimen only obtained.

The remaining species catalogued from Fiji recorded in Grey's Hand-book of Birds, &c., &c., are—

1. Circus gouldii, *Bp.*
2. Strix lulu, *Peale.*
3. Hirundo tahitica, *Gml.*
4. Myzomela nigriventris, *Peale.*
5. Ptilotis procerior, *Hartl. and Finsch.*
6. Zosterops flaviceps, *Peale.*
7. Zosterops explorator, *E. L. Layard, P.Z.S.*, 1875, *pt.* I. p. 29.
8. Lamprolia victoriæ, *Hartl. and Finsch, P.Z.S.*, 1873, p. 733.
9. Lamprolia klinesmithii, *Ramsay, P. Linn. Soc. N.S.W.* 1875, page 68.
10. Tatare ? viridis, *E.L L., P.Z.S.*, 1875, II. p. 150.
11. Myiagra azureocapilla, *E.L.L*, *Ms.s.*
12. Rhipidura albogularis, *E.L.L., P.Z.S*, 1875, *pt.* I. p. 29.
13. Lalage nigrogularis, *E.L L., P.Z.S.*, 1875, *pt.* II. p. 149.
14. Myiolestes henlei, *Hartl. and Finsch.*
15. Myiolestes macrorhyncha, *Hartl. & Finsch., P.Z.S.*, 1859, *p.* 157.
16. Pachycephala graffei, *Hartl. Ibis.*, 1866, p. 172.
17. Pachycephala torquata, *E.L.L., P.Z.S.*, 1875, *pt.* II. p. 150.
18. Pachycephala macrorhyncha, *E.L.L., P.Z.S.*, 1875, *pt.* II. p. 150.
19. Aplonis cenerascens, *H. and F., P Z.S.*, 1871, *p.* 29.
20. Platycercus hisginus, *Forst.*
21. Platycercus tabuensis, *Gml.*
22. Platycercus taviuniensis, *E.L.L., M.S.S.*
23. Ptilinopus porhyraceous, *Forst.*
24. Phlegænas starrii, *G. R. Gray, P.Z.S*, 1856, *pl* 115.
25. Hypotenedia philippensis, *L.*
26. Porphyrio vitiensis, *Peale.*
27. Dendrocygna vagans, *Eyton.*
28. Anas superciliosa, *Gml.*

29. Ardea (Butoroides) Javanica. ; *E L.L., P.Z.S.*, 1865, *p.* 29.
30. Fulmarus cærulens, *Gmel., I.S.A.Z., pt.* 44.
31. Fulmarus macgillivrayi, *G. R. Gr.*
32. Sterna melanauchen, *Gould, B. Austr.* VII. *pt.* 26.
33. Sterna novæ-hollandiæ, *Cuv., Gould, B. Austr.*, VII. *pt.* 24.
34. Sterna melanauchen, Tem. *Gould, B. Austr.* VII. *pt.* 28.
35. Gygis candida, *E. L. L., P.Z.S.*, 1875, *pt.* I. *p.* 29.
36. Anous stolidus, *Linn.*
37. Tachypetes aquila. ; *E.L.L., P.Z.S.*, 1875, *pt.* I. *p.* 29.

As far as we have records, then, the Avifauna of Fiji consist of about 74 described species, of which, I have no doubt, several will eventually prove to be mere local varieties of S. S. Island forms, the great scarcity of the Accipitres or birds of prey is noticeable, but this fact is not very remarkable when we remember the paucity of bird-life in general, and the few mammals which inhabit these islands; but it is somewhat surprising to find so few sea birds recorded; from the immense numbers of fish both specifically and individually which frequent these islands, one would naturally expect to find more than eight species frequenting the shores.

I cannot pass over this collection without drawing attention to the beautiful and varied forms of fruit eating doves which inhabit the islands, particularly the beautiful and remarkable plumaged Chryssænæ, a peculiar and well marked genus allied to (but very distinct from) *Ptilinopus*; *Ch. luteovirens* has been long known to science, but only of late years has it been otherwise than extremely rare in collections—*Ch. victor* first described by Mr. Gould, is perhaps, one of the most beautiful birds of its tribe, while lately, during the cruise of H.M.S. "Challenger", a third species *Ch. viridis* has been discovered, and lately described by Mr. E. L. Layard, M.B.M. Consul at Fiji; from information I have lately received I feel convinced that a fourth species will yet be found belonging to this remarkable genus.

The peculiar PHLEGÆNAS STAIRII, *G. R. Gray*; seems to take the place of our ground or scrub pigeon *Chalcophaps chrysochlora*, but appears to be very rare. Another feature in the Fiji Avifauna, well worthy of notice, is the lately discovered Passerine form, *Lamprolia,* which seems to vie with our Rifle-birds (Ptiloris) in brilliancy of plumage. Of this we know two species, closely allied but quite distinct; both remarkable for the silky snow-white plumage of the upper tail coverts and central portion of the tail feathers, and the black, glossy, steel-blue-tinged plumage of the remaining parts. The larger of these birds, *Lamprolia victoriæ,* I have not seen. The smaller, which I have named after its discoverer Mr. Klinesmith—*L. klinesmithii*—I have already exhibited this evening.

Since the above was written Mr. E. L. Layard's list of Fiji Island Birds has come to hand (P.Z.S., pt. III., 1875, p. 423), which enables me to add the following species with some remarks upon them :—

### ASTUR CRUENTUS ; *Gould.*

This will doubtless prove to be *A. rufitorques* of Peal, and not the true *A. cruentus* of Gould.

### CIRCUS ASSIMILIS, *Jard.* and *Selb.*

Most probably C. gouldii, *Bp.*

### STRIX DELICATULA, *Gould.*

Evidently S. lulu, of Peale, a smaller allied species.

### ENDYNAMYS TATIENSIS (*Sparrm*).

Highly doubtful, and not seen by Mr. E. S. Layard.

### CHALCITES, *sp. inc.*

Given on the authority of Mr. Thurston.

### CAPRIMULGUS, *sp. inc.*

Given on authority of natives only.

### COLLOCALIA VANICORENSIS, *Q.* and *Gaim.*

Given on authority of Hartlaub and Finsch.

### APLONIS TABUENSIS, *Gml.*

Most likely *A. cassinii,* (*Peale.*)

### CARPOPHAGA PACIFICA, *Gml.*

This is *C. microcera,* (*Bp.*) Ic. P. t. 36 : or probably *C. pacifica,* p.; Hartlaub and Finsch ; Mr. E. L. Layard does not say whether he has seen anything more of it than the eggs, which he describes. If it is the true *C. pacifica.* (*Gmel.*) Fiji is certainly a new locality for the species which is reported to be from Tonga.

### ORTYGOMETRA QUADRISTRIGATA, *Horsf.*

Not seen by Mr. Layard, but evidently given on the authority of Hartl. and Finsch.

### STREPSILAS INTREPRES, *Linn.*

One obtained by Mr. Layard at "Navua" on Viti Levu.

### ARDER SACRA, *Gml.*

"Common all over th country among the mangroves." E. L. L. Syn. *Ardea* (*Demiegretta*) *gugularis* (*Forst*), and *A greyi Gould.*

### STERNA BERGII, *Licht.*

Syn. *S. cristata,* (*Steph.*)

### STERNA LONGIPENNIS, *Nordm.*

Syn. *S. frontalis* (G. R. Gr.), probably S. melanorhyncha, Gould.

### STERNA PANAYA, *Gmel.*

Syn. *Hydrochelidon panayensis* ; Anous leucocapillus, *Gould*

### PUFFINUS NUGAX, *Sol.*

Mr. E. L. Layard does not say whether he saw this species or not, or merely gave it on the authority of Hartl. and Finsch.

### PHAETON ÆTHEREUS, *Linn.*

From the context it is evident Mr. E. L. Layard meant *P. rubricauda,* (*Bodd.*) of which *P. æthereus* (*Bl.*) is a synonym ; Mr. E. L. Layard does not appear to be quite sure about the identity of this species.

### DYSPORUS SULA, *Linn.*

This is I presume *Sula fiber* of Linn ; but more probably *Sula serrator* Bks., *S. australis,* Gould B. Austr. VII. pl. 76.

Notwsthstanding the slight differences in the nomenclature which has evidently arisen from the want of books for reference, Mr. E. L. Layard's paper contains much new matter, and some valuable information on the habits of the avifauna of the group.

### Description of a supposed new species of Bat, from Stanwell, near Bulli, N.S.W., by E. Pierson Ramsay, F.L.S., C.M.Z.S., &c.

### TAPHOZOUS HARGRAVEI. *sp. nov.*

Incisors ... ... $\frac{1—1}{2—2}$ Canines ... ... $\frac{1—1}{1—1}$

Præmolars ... $\frac{2—2}{2—2}$ Molars ... ... $\frac{3—3}{3—3}$

Total length 4·6 inches ; head 2·3 x 6·5 ; ears 0·8 x 0·5 ; tail 0·9, free portion 0·15 ; arm 1·7 ; forearm 3 inches ; thumb, 0·3.

First finger, 2·9.

Second ditto ; first phal., 3·2 ; second phal., 1·4 ; third, 1·35.

Third ditto ; first phal., 2·4 ; second, 0·8 ; third, 0·3.

Fourth ditto ; first phal., 2 inch ; second, 0·7 ; third, 0·45.

Tibia, 1·05 inch.

Tarsus, 1·05."

Carpals and phalanges (foot), 0·6 inch ; distance, from tip of tail to outer margin of the membrane, 0·5 inch (*dried skin*) ; ears large, somewhat triangular, pointed at tips, rounded behind, length, 0·6 ; breadth, 0·5 inches, tragus, 0·25 x 0·15, rather long; three sided, the anterior margin almost straight, curved forwards, upper margin irregular, almost at right angles with it, slightly rounded ; posterior margin curved, having a deep indentation near the base.

***The upper incisors*** very minute simple, ***the lower*** small, trilobate. ***Canines*** very strong rather blunt, curved, conical with a small sharp lobe at the base of the inner (not posterior) side, a narrow groove on either side of it and a small round compressed tubercle at its base. ***Lower canines*** : strong, stout, curved, not quite so long as the upper, with a fold or collar at the base forming a small lobe posteriorly, lower canines and incisors closing in front of the upper. ***Premolars*** : ***lower jaw,*** the first small, curved, sharp ; second, longer, acute, broad at the base with small inner basal lobe ; ***Premolars, lomer jaw,*** first acute, second longest, both having a small inner posterior basal lobe, and a well defined collar. ***Molars**, above*, first and second equal, having three pointed sharp ridges externally, formed by two triangular groves in the crown of the tooth, and two sharp similar ridges internally; each with a strong triangular sharp inner basal lobe; third molar, a compressed sharp ridge with a small tubercle on either side at the base. *Molars below*; first and second nearly equal, showing two exterior triangular concical tubercles, the anterior one the larger, and three inner smaller tubercles; third smaller, with two outer similar ridges and two inner tubercles.

There is no sign of a gular pouch.*

A few long hairs directed forwards on the side of the face, a fringe of short hairs on the lips, nostrils on margin of upper lip, terminal, simple; the fur on the throat and chest long and silky, a few black hairs at the base of the ears inside. The wing membrane extends from the ankles. The whole of the membrane, skin and fur of the upper surface jet black, silky; the whole of the under surface silky white. Sex, a male.

*Hab.* holes and caverns in rocks, near Bulli, sea coast, East coast of N. S. Wales.

This fine species was first found some twelve months ago, by my friend Ralph Hargrave Esq., at Stanwell, near Bulli. It is larger than the majority of our bats, and may easily be distinguished by the snow-white colour of the fur on the under side; and the membrane and *whole of the fur on* the upper side being *black*. It seems to be allied to *Taphozous affinis*, of Dobson†, from Labuan, but differs in having no pouch, and in the shortness of its tail, also in the colouring of the different parts. The tail is remarkably short, about half an inch *within* the outer margin of the caudal membrane, which is three-sided (*not pointed*), the two lateral margins connected with the ankles are thickened.

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* The skin is much mutilated, but I have examined it carefully in water.

† Ani. and Mag. Nat. Hist., 4th Series, Vol. 16., No. 93, p. 232.

## MONDAY, 31st JANUARY, 1876.

WILLIAM MACLEAY, ESQ., PRESIDENT, in the Chair.

The business of the Annual Meeting was first proceeded with.

The Honorary Treasurer, Mr. H. H. BURTON BRADLEY, presented his report, showing (with balance carried forward from last year of £91 10s. 2d.) gross collections amounting to £187 0s. 2d.; and disbursements for rent, printing, &c., of £86 4s. 4d.; and leaving a balance forward of £100 15s. 10d., reducible by cheques outstanding to £87 0s. 10d. He also presented a statement showing subscriptions outstanding on 1st January, 1876, of £191 6s., and mentioned that all accounts had been paid to 31st December, 1875.

The election of officers for the ensuing year was proceeded with, and the following were chosen :—President, Mr. William Macleay, F.L.S.; Vice-President, the Hon. Sir W. Macarthur, M.L.C.; Hon. Secretary, Commander Stackhouse, R.N.; Hon Treasurer, Mr. H. H. Burton Bradley. Council: Mr. H. C. Alleyne, M.D.; Professor Liversidge; Mr. James C. Cox, M.D.; Mr. E. P. Ramsay, F.L.S.; Mr. Alfred Roberts; Mr. W. J. Stephens, M.A.

A vote of thanks was passed to the office-bearers of the past year.

### THE CHAIRMAN'S ADDRESS.

The CHAIRMAN read the following address :—

The Linnean Society of New South Wales has now completed the first year of its existence, and in accordance with a rule observed by almost all societies of a similar kind, I take the opportunity of the annual meeting to give you an address upon the progress of the Society and of Natural History generally during the past year, but chiefly in what relates to Australia and Australian surroundings.

The object of the society has been succinctly stated in the published rules to be "the cultivation and study of the Science of Natural History in all its branches." But comparatively few people are aware what a vast field of inquiry and study is included under the term Natural History, as understood in its true meaning, and as taught by the illustrious man whose name we have adopted for this society.

The great divisions of Nature—Zoology, Botany, Mineralogy, and Meteorology include within them the sciences of Anthropology, Ethnology, Animal and Vegetable Physiology, Histology, Geography, Geology, Palæontology, and to some extent even those of Chemistry and Medicine.

The extent and interest, therefore, of the many subjects comprehended within the scope of the society gave the hope that in a country such as this, comprising in its population a more than average number of men of good and liberal education, it would not have been difficult to inaugurate and carry on successfully a society formed solely for the cultivation of natural history.

Attempts had been previously made in Sydney to establish Societies of Natural History, but on a narrowor limit than the present. I was for some years here connected with a society which was limited to the science of Entomology. While it lasted that Society was most successful. Two volumes of transactions were published, and the demand for these works in Europe sufficiently demonstrates the value placed on them by the scientific world. But the sole charge of keeping up the Society ultimately fell upon such a very few individuals that it was at length given up. And such I fear will always be the fate of scientific societies as soon as the novelty of initiation wears off, unless its objects comprise a sufficient scope of subjects to hold together a number of working members. It is in the belief that an ample variety of subjects are embraced under the term Natural History, to effect this purpose, that the present Society has been formed. It is at present, as I have said, the only exclusively natural history Society in New South Wales, and I believe in Australia, though there are others of a most useful character in which some excellent scientific papers have been read—I allude particularly to the Royal Society of Sydney. This is a well-established society, possessing ample funds, and having a long list of subscribing members. It has, moreover, among its office-bearers and members the most scientific men in the community, and a number of valuable papers have been read at its meetings. But mingled with those scientific papers have been others not of a scientific character, and possessing certainly no interest except of the most local kind. The publications of its proceedings also have not been conducted with the celerity and regularity to be expected from a society not deficient in point of means, and it is that irregularity and uncertainty in publication which makes it as a society useless as a record of zoological, botanical, or geological discovery.

Our Society has as yet had no reason to complain of want of public support. The list of members is large, the funds, as will be seen by the report of the hon. treasurer, have not been deficient, and the proceedings of the monthly meetings, with the papers read, have been printed as soon as the matter in hand was sufficient for an octavo sheet. And the only regret I have to express is, that the numbers of those contributing papers are not greater, and that Zoology seems to turn the scale upon Botany and Geology.

Everything, however, must have a beginning, and I cannot say that the difficulties experienced in the formation of the Linnean Society of New South Wales—difficulties which have been chiefly felt and encountered by our excellent honorary secretary, Captain Stackhouse, R.N.—are greater than those usually encountered under similar circumstances.

The papers read at the monthly meeting of the society since its inauguration, are as follows :—

By Mr. Brazier: Descriptions of fourteen species of terrestrial fluviatile and marine shells from Australia and the Solomon Islands.

Description of eight species of Australian and Tasmanian land and freshwater shells.

By Mr. Ramsay : Description of a new species of *Ptilotis* from the Endeavour River, with some remarks on the natural history of the East Coast Range near Rockingham Bay.

Description of a new *Trichoglossus* from Fiji.

Description of a new rat kangaroo, *Hypsiyrymnoden moschatus.*

Descriptions of a new genus and Species of birds, *Vitia ruficapilla*; also of the following new species: *Merula ruficeps, Rhipidura personata, Pachycephala Randavensis* and *Lamprotia Klinesmithii,* all from Fiji.

Description of *Pachycepala citreogaster,* from New Britain.

Remarks on a collection of birds lately received from Fiji, and now forming part of the Macleayan museum, with a list of all the species known to inhabit the Fijian group.

Description of a new species of bat, *Taphyzous Hargravii.*

By Dr. Cox: On the arms and weapons of the aborigines of Australasia and Polynesia.

My own contributions have been. A short account of the *Entozoa* taken from a sun fish, captured at Port Stephens.

Notes on a new species of *Dendrophis,* from Cleveland Bay.

General observations on the zoological results of the Chevert expedition to New Guinea.

By Mr. Masters: Part 1 of the ornithology of the voyage of the Chevert. This paper treats of the Australian birds only, it contains descriptions of ten new species, and gives much information about many previously little known. The birds of New Guinea will form the subject of Mr. Masters's next paper.

In addition to the reading of these papers there have been some very interesting exhibits at the meetings, and several handsome donations have been made to the Museum of the society.

The papers read during the same period at the meetings of the Royal Society of New South Wales on scientific subjects have been—

Descriptions of eleven new species of terrestial and marine shells from the north-east coast of Australia. By John Brazier, C.M.Z.S.

Iron and coal deposits at Wallerawang. By Professor Liversidge.

Nickel mineral from New Caledonia. By Professor Liversidge.

Results of observations of the late Transit of Venus. By H. C. Russell, M.A., Government Astronomer.

Results of observations at Eden of the late Transit of Venus. By the Rev. William Scott, M.A., Warden of St. Paul's College.

The President of the Society, the Rev. W. B. Clarke, M.A., read on the occasion of the annual meeting on the 12th May a very lengthy address on a variety of subjects of the greatest interest to the naturalist. The matter chiefly dwelt upon, however, was the scientific results of the Challenger expedition, and a most elaborate and interesting account of the wonderful deep-sea discoveries of Professor Wyville Thomson and his able assistants takes up the largest portion of this very able address. The reverend gentleman has since supplemented his address by reading at a meeting of the society only a month ago a further account of the Challenger discoveries, bringing in fact our knowledge of their proceedings down to the present day.

A very useful little volume has been published during the year, at the Government Printing Office, by the direction of the Hon. John Lucas, Minister for Mines. It is entitled "Mines and Mineral Statistics of New South Wales," and contains :—Notes on the geological collection of the Department of Mines. By Charles Wilkinson, Esq., Government geologist.—Remarks on the sedimentary formations of New South Wales. By the Rev. W. B. Clarke, M.A., F.G.S., F.R.G.S., &c.—Notes on the iron and coal deposits of Wallerawang, and on the diamond fields. By Professor Liversidge, F.C.S., F.G.S., &c.; and reports from the Wardens of the various gold mining districts of the colony.

Another work of a very useful character has just issued, or is about to issue from the Government Printing Press. It is the first part of a work on the birds of Australia, by E. P. Ramsay, F.L.S., &c., Curator of the Australian Museum. The part now published comprehends the whole of the raptorial birds, and if the work is completed in the same careful and correct way as the first part, it will prove of the greatest value to the ornithologist.

I have not been able to hear of any Botanical publication in New South Wales during the year.*

In the colony of Victoria there are several societies of a more or less scientific character.

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* This is a mistake. I find that during the year a very beautiful illustrated work on the Orchids of Australia has been printed at the Government Printing Office by Mr. Fitzgerald of the Lands Department.

Of these the Royal Society of Victoria takes the first place.

The papers read at its meetings during the last year on subjects connected with Natural History were :—

On some upper *Paleozoic Polyzoa* from Queensland. By Mr. R. Etheridge.

On the Importance of a more close and systematic observation of the Oceanic and Atmospheric Phenomena of our Coasts. By Mr. T. Rawlinson.

An account of some of the results of the Challenger Expedition. By Mr. G. Foord.

On the phenomena of approach and recession exhibited by bodies under the influence of radial energy. By Mr. A. M. Smith.

On the meteor of April 15. By Mr. J. Berry.

The Zoological and Acclimatisation Society of Victoria have, I am told, published during the year a volume of their Transactions, but I have been unable to procure, or even see, a copy of it, and I am entirely without information as to the character of the publication.

The Microscopical Society of Melbourne has, I am informed, held many meetings during the year, but has not published anything.

The Mining Department of the Victorian Government has just published a geological map of the whole of Australia, accompanied by a progress report of the geological survey of Victoria. By Mr. R. B. Smyth. A description of some fossil fruits from the gold drift sections of Victoria. By Baron Von Mueller.—Two decades of the palæontology of Victoria. By Professor M'Coy.—Several essays by the analyst, Mr. Cosmo Newberry, Mr. Howitt, and others taking part in the geological survey.

Baron Von Mueller has also just published a small pamphlet on some Papuan plants, collected during my late expedition to New Guinea, in the Chevert. The same distinguished botanist has, I believe, published several parts of his "*Fragmenta Phyotgraphiæ Australiæ*," during the past year, as well as a long and really useful article in some publication connected with the International Exhibition at Philadelphia, on the subject of the vegetative capabilities of Victoria.

It will thus be seen that our neighbours of Victoria are far from being behind-hand in the pursuit of natural history.

I have not been able to ascertain that anything has been published in Queensland having reference to natural history during 1875. But a museum has been founded at Brisbane, and considerable progress has been made towards a geological survey of the colony.

In South Australia, Mr. Waterhouse, the director of the public Museum at Adelaide, has published a catalogue of the mammals and birds of that colony and of the Northern territory; and Dr. Schomburgh, the director of the public gardens, has published an interesting paper on the flora of the colony, giving a complete list of all the plants known both in South Australia proper and the Northern territory. Both these papers have made their appearance in a volume published by order of the Government for the International Exhibition at Philadelphia, under the name of the "Handbook of South Australia."

Tasmania still remains the subject of the very interesting experiment made some years ago of introducing salmon ova into its rivers. Many reports have each year been circulated about the reappearance of these fish, and I believe that there is good ground to believe now that such is really the case; but definite proof seems still to be wanting of the perfect success of the experiment.

I find it impossible to get information as to what has been done in scientific matters in New Zealand during the past year; but we know that it possesses four museums, each presided over by men of scientific eminence, and that the colony numbers among its population many gentlemen of considerable scientific attainments. I have only seen one publication—a small volume on the geology of Otago, by F. W. Hutton, Provincial Geologist. From Newspapers also I derive the information that considerable discoveries have been made of *moa* and other bones, giving evidence of the very late disappearance of these gigantic birds.

In other parts of the world, amidst a mass of works published on natural history, a good deal has been written which refers to Australian subjects.

The "Proceedings of the Zoological Society of London for 1875" (including Part 4 of 1874, but published in 1875) contain the following :—

Letter concerning the existence of a new parrot on the east coast of Australia. By John Goold, F.R.S., &c.

Descriptions of five new birds from Queensland, and of the egg of *Chlamydodera maculata.* By E. P. Ramsay, C.M.Z.S.

Description of a new species of kangaroo. By Albert Gunther, V.P.Z.S., &c.

Ornithological notes from Fiji, with descriptions of supposed new species of birds. By E. L. Layard, F.Z.S., &c., H.B.M. Consul for Fiji and Tonga.

Descriptions of ten new species of shells from the collection of Mr. Charles Coxen, of Brisbane. By John Brazier, C.M.Z.S., &c.

On the kangaroo called *Halmaturus luctuosus,* by D'Albertis, and its affinities. By A. H. Garrod, B.A., F.Z.S., Fellow of St. John's College, Cambridge, Protector of the Society.

Notes on the original specimen of *Ptilonorhyncus Rawnsleyi.* By E. P. Ramsay, C.M.Z.S., &c.

Further remarks on the Cassowaries living in the Society's Gardens, and other species of the genus *Casuarius.* By P. L. Sclater, M.A., Ph. D., F.R.S., Secretary to the Society.

Descriptions of some rare eggs of Australian birds. By E. P. Ramsay, C.M.Z.S.

Descriptions of some supposed new species of birds from the Fiji Islands. By E. L. Layard, F.Z.S., H.B.M.C., administering the Government.

Descriptions of three new species of Australian birds. By John Gould, F.R.S., V.P.Z.S., &c.

Descriptions of three new species of shells from Australia. By George French Angus, C.M.Z.S., F.L.S., &c.

Notes on Fijian birds. By E. L. Layard, F.Z.S., &c.

The twenty-first of his series of memoirs on the extinct birds of the genus *Dinornis.* By Professor Owen, C.B., F.R.S., &c.

The proceedings of the Linnæan Society of London for 1875 do not contain (as far, at all events, as their publications have reached this country) any paper specially relating to Australia, either in their zoological or botanical divisions. This, however, is unusual, as during the last few years many articles, chiefly on the entomology of Australia, have appeared in its journal from the pen of Francis P. Pascoe, F.L.S., and E. Saunders, F.L.S.

The publications affecting Australia in the Transactions of the Entomological Society of London are :—

Contributions towards a knowledge of the *Rhopalocera* of Australia. By Arthur Butler, F.L.S. and F.Z.S., &c.

Descriptions of new *Coleoptera* from Australia. By Charles O. Waterhouse.

The Annals and Magazine of Natural History (the very best periodical I know) have the following articles more or less affecting Australia.

Description of two new species of *Crustacea*, from New Zealand. By Captain F. M. Hutton, C.M.Z.S., &c.

Notes on *Coleoptera*, with description of new genera and species, part 3. By Francis P. Pascoe, F.L.S., &c.

Descriptions of five new species of fishes, obtained in the New Zealand seas, by H.M.S. Challenger's expedition, in July, 1874. By James Hector, M.D., C.M.Z S., &c.

Notes on certain genera of *Agaristidæ*, with descriptions of new species. By Arthur Gardiner Butler, F.L.S., F.Z.S., &c.

· On *Pelagonomertes Rollestoni.* By H. N. Mosely, naturalist on board H.M.S. Challenger.

On a third new Tertiary species of *Trigonia.* By Frederick M'Coy, Professor of Natural Science in the University of Melbourne.

Dr. A. B. Meyer, on the identity of *Ceratodus Forsteri* and *Miolepis.* From the proceedings of the Royal Society.

Notes on an apparently new parrot, from Cardwell, N.E. Australia. By Frederick M'Coy, Professor of Natural Science in the University of Melbourne.

Additions to the Australian *Curculionidæ,* Part 8. By Francis P. Pascoe, F.L.S., &c.

On a Tertiary *Pleurotomaria.* By Frederick M'Coy, Professor of Natural Science in the University of Melbourne.

Descriptions of new genera and species of New Zealand *Coleoptera*. By Francis P. Pascoe, F.L.S., &c.

Further contributions to the Ornithology of Australia. By John Gould, F.R.S., &c.

Descriptions of new species of New Zealand Fish. By F. M. Hutton, Curator of the Otago Museum.

On some New and Undescribed Species of *Crustacea*, from the Samoan Islands. By Edward J. Miers, Zoological Department, British Museum.

Descriptions of a new species of *Trichoglossus*, from Fiji. By E. L. Layard, F.Z.S., Consul for Fiji and Tonga.

I am aware that the list I have now given of the papers read and books written during the year, bearing chiefly on the natural history of Australia is a most imperfect one, even as regards the publications in the colonies themselves, as well as in the mother country.

But to give a full and correct list is quite beyond my power. To do so would necessitate the examination of a series of foreign scientific periodicals, too numerous to mention. Suffice it to say that the student who wishes to keep himself informed as to all the literary productions on the natural history of Australia must gather his information from a multiplicity of sources, and in a variety of languages. That this is so, I can myself testify, but is it either right or necessary that it should be so?

As we know, the study of natural history is, as a rule, more general in France and Germany than it has ever been in England, and it is to the great naturalists of these countries the scientific world is indebted for the most prized and valuable works. I admit, therefore, that any one aspiring to what may be called the higher branches of natural science must be a good linguist. He must be acquainted with Greek, Latin, French, and German, and would find the benefit of knowing also the Dutch, Italian, Russian, and Norwegian languages. But there may be, and indeed are here, many ardent students of nature, who are not polyglottists, and who, even if they were, have not the means of accumulating the mass of literature necessary to enable them to investigate a single group of a strictly Australian family.

This difficulty may, I think, be much reduced, if not ultimately entirely obviated, by means of our society.

With this view I would suggest that upon any revision or reclassification of a group of plants or animals undertaken by a member of the society, such revision or reclassification should be accompanied by reproduced descriptions of each genus and species, with proper references to the original authors.

Of course these pirated descriptions should be avoided where the original work is at all attainable.

My position as President of this Society gives me no right to thrust my advice upon you, but I am desirous of giving assistance, in so far as my judgment approves, in contributing to the usefulness of the society, and I claim to know to some extent how that can be best accomplished.

I am convinced that we cannot do better in the present state of Natural History in Australia than confine our attention to observing, cataloguing, and describing. The synthetical work may well, I think, be left for the present to the legion of writers who aspire to what is foolishly called "high science."

The reason why I recommend descriptive catalogues is because they are not only what are most required (our knowledge of the Fauna of Australia being still very limited), but because any generalization of, or deductions from, what we do know cannot be of much value with our present imperfect knowledge.

Something has already been done in this direction in this country. Mr. Kreft, the late Curator of the Australian Museum, published some years ago an excellent work on the then known snakes of Australia. The late Dr. Grey, of the British Museum, published also, some years ago, "The Lizards of Australia;" and Mr. Masters has compiled catalogues of our *Coleoptera* and *Diurnal Lepidoptera.*

There is no better exercise for the student than the describing of new species, and there certainly is no better way of making himself useful to the workers in other spheres of Natural History who have not the same opportunities of observation and comparison. Classification and nomenclature which involves the description of new species are to science what grammar and words are to a language. Without them it becomes impossible to benefit by the observations of others, or to communicate to others one's own. The analytical experience also, which is involved in the act of description, and the careful study it necessitates of structure and anatomy, render it a good as well as useful way of laying the solid foundation of knowledge, on which a superstructure of " high science " may be reared.

The progress of natural science generally throughout the year 1875, if estimated by the number of publications and the mass of printed matter laid before the public, would be perhaps above the average.

And undoubtedly some men of the highest renown as physiologists have during that period contributed much towards our acquaintance with both animal and vegetable structure. But unfortunately it seems to have become the fashion, even among our best men, English and foreign, to aim at originality by being obscure, to confound physics and metaphysics, and to substitute transcendentalism for a plain statement of facts. And I am afraid that this sort of writing is encouraged by a reading, but not very discerning public, who are prone to accept sensationalism as a mark of genius, and long words as proofs of knowledge.

Foremost amongst the books of the year must be reckoned Darwin's " Insectivorous Plants." In this admirable work we have, as indeed in all his productions, an example of patient and laborious investigation, coupled with synthetical genius of most remarkable power.

Next to Darwin may be ranked Häckel. No modern physiologist has been a more ardent or voluminous supporter of the evolution theory of creation for some years than Häckel. His latest work, published in 1874, though not reaching this country till 1875, entitled " Die Gustræa—Theorie, die phylogenetische Classification und die Hemelogie der Keimblatter," is an attempt to found a theory of classification, or even creation, upon an embryonal form, which he names *gastræa*.

Another German, Dr. Alexander Götte, Professor of the University of Strasburg, has another embryonic theory, and endeavours to show that every species originates through the laws regulating the first divisions of the yolk.

And still another German, Dr. Anton Dohm, now of Naples, asserts with some force that development is not always progressive in the sense meant by Lamarck, but that it is quite as ready to be retrogressive.

Professor Huxley also has during the year propounded a new classification of the animal kingdom, founded chiefly, as I understand it, upon visceral development, on the ground that a Phylogenetic classification, though the best, cannot for a long time be investigated in such a thorough manner as to form a sound basis of taxonomy.

These are, I think, the chief of what may be called the speculative works on natural science lately published; but there are many others of a perhaps more useful but less pretentious character, which I would willingly notice if time and space would warrant it.

It is evident, I think, from the general tenor of scientific literature for some years past, that the evolution theory, long so unpopular, and which under Lamarck's teaching gained so few proselytes, has, under the superior fascinations of Darwin's admirable work, "The Origin of Species," become the fashionable faith.

But what may be generally believed is not necessarily true or worthy of belief.

The mass of the reading world are generally prepared to accept without much question, the views adopted by those whom they have been accustomed to look up to as authorities.

The really scientific men who have become converts to the doctrine, and they are now very numerous, differ in reality a great deal more than they agree. While all accept the principle of evolution, they almost all differ as to the process. The consequence is, that we have theory after theory propounded, all founded no doubt, upon useful and laborious investigations, but which are useless in themselves, except as giving a motive for more extended observations.

I believe myself, that the Scottish verdict of "not proven" would be the best way of meeting all these barren theories.

We know certain things. We know from the evidence of the rocks that species both of plants and animals have existed on the earth, which are now extinct. We know that species which now exist did not exist at a previous period. And we know that no apparent variation can be traced in any existing species since the period assigned for man's first appearance on the globe. And it must be admitted that the testimony of the rocks, so far from giving ground for a theory of a continuous modification of form, seems rather to afford proof that there have been many successions of distinct creations at long intervening periods.

Our knowledge of creation or of the order of creation extends no further than this, notwithstanding the anxious efforts of the most accomplished men of the present and past generations. It seems really as if we had, at this point, reached the utmost range of the human intellect.

But if the mystery of creation is ever to be unveiled by man—if the plan of the universe, or, in other words, the mind of the Almighty is ever to be ascertained by human means, it will be by a thoughtful study of the works of the Creator, and by a genuine searching after truth, unbiassed by all previously-conceived theories.

The business of the ORDINARY MONTHLY MEETING was then proceeded with.

WILLIAM MACLEAY, ESQ., PRESIDENT, in the Chair.

### MEMBERS PROPOSED.

Mr. Harrie Wood, Under-Secretary for Mines; Mr. Guilfoyle, Director Botanic Gardens, Melbourne; the Hon. F. Lord, M.L.C., St. Leonards; Mr. Alfred Brown, of Queensland.

MR. BRAZIER read the following Paper:—

## Description of two new species of Australian Land Shells.—

By J. Brazier, C.M.Z.S.

### 1.—Helix (Hydra) Tomsoni.

Shell umbilicated, depressly globose, solid, surface covered with lengthened granulations; distinctly banded with spiral chestnut lines and bands; a broad one at the suture, whorls 5, rather convex, the last roundly convex, base convex, marked same as upper surface; having a dark broad band round the umbilicus, aperture roundly lunate, bluish white within, peristome thickened and reflected, margins approximating, the right descending, columellar margin largely reflected over the umbilicus.

*Diam.* Maj. 14, min. 12, alt. 11 lin.

*Hab.* Mount Elliott, Queensland.—Coll., Mr. C. Coxen.

### 2.—Helix (Hydra) Hanni.

Shell umbilicated, depressly globose, finely obliquely striated, fulvous, ornamented with two broad chestnut zones, one at the suture and one a little above the periphery; spire depressed, obtuse, whorls 5, convex, the last roundly convex, base convex, and ornamented with numerous chestnut lines, one broad with darker between, and a broad one encircling the umbilicus, aperture oblique, lunately rounded, peristome blackish reflected, margin approximating, right descending, collumellar margin reflected and expanded over the umbilicus.

*Diam.* Maj. 15½, min. 12, alt. 9½ lin.

*Hab.* Bowen, Port Denison, Queensland.—Coll., Mr. C. Coxen.

I have only seen one specimen of this species, and it differs from *Helix Incei* and *Yulei* by being more depressed and broader, and in its lesser markings.

## MONDAY, 28TH FEBRUARY, 1876.

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WILLIAM MACLEAY, Esq., President, in the Chair.

### NEW MEMBERS PROPOSED.

Eyre Goulburn Ellis and E. Reading, Esqs.

### MEMBERS ELECTED.

Mr. Harrie Woods, Mr. Guilfoyle, Hon. F. Lord, Mr. Alfred Brown.

The following papers were read:—

## Descriptions of Thirty-five new species of Land Shells from New Guinea, Australia, and Islands in Torres Straits, collected during the Chevert Expedition—by JOHN BRAZIER, C.M.Z.S.

THE collection of shells made during the voyage of the "Chevert" is very large, and comprises many species hitherto unknown. The arrangement and descriptions of them, which, by Mr. Macleay's desire, I have undertaken, is not, therefore, a thing that can be done in a day, or in one paper; I have accordingly limited myself in this, the first of a series of papers, to the descriptions of the new species of land shells in the collection.

### 1.—HELIX (RHYTIDA) BEDDOMEI.

Shell largely and openly umbilicated, rather depressly globose, very thin, obliquely closely rugosely striated on upper surface, pale yellowish brown, shining, irregularly streaked with dark yellow; apex obtuse, whorls 4½, moderately convex, the last very large, slightly flattened and inflated in front; suture distinct, rounded at the periphery; base convex, nearly smooth, umbilicus perspective, margin smooth, aperture oblique, lunately ovate, peristome simple, pinkish within, margins approximating, the right descending in front, collumellar margin broad and reflected.

*Diam.* Maj. 14, min. 11½, alt. 7 lin.

*Hab.* Albany Island and Cape York, North Australia.

This species is somewhat allied to *Helix Franklandensis* Forbes —it differs by being much thinner, more turbinated, coarser in sculpture, smaller umbilicus, pale yellowish, with darker radiating streaks. It was first found by Mr. C. E. Beddome, on Albany Island, some distance below the surface, amongst great quantities of volcanic scoria, and when at Cape York last July, 1875, I also found it in the same localities

### 2.—HELIX (RHYTIDA) JAMESI.

Shell umbilicated, flatly orbicularly depressed, very closely and finely striated, glossy, bright horn yellow, streaked with brown rays; whorls 4, slightly convex, quickly increasing, last very large and flattened in front; not descending, striæ showing more plainly at the suture, spire depressed, apex obtuse, roundly convex at the periphery, base rounded, nearly smooth, rayed as above, umbilicus wide and moderately deep, aperture diagonal, lunately oval, peristome thin, simple, margins distant, right straight, the outer arched, columellar slightly reflected.

*Diam.* Maj. 10½, min. 8½, alt. 4 lin.

*Hab.* Palm Island, North-east Australia.

This species approaches to *Helix capillacea Fér.* It differs by being flatly depressed, nearly smooth, showing very faint silky lines, at the suture they become more like fine ribs; colour different, and rayed with brownish-yellow; umbilicus much wider, and in all respects a much thinner shell. Five specimens found under stones in the thick jungle.

### 3.—HELIX (RHYTIDA) HOBSONI.

Shell umbilicated, rather flatly orbicularly depressed; thin, glossy, dark-yellowish horn, nearly smooth, faintly striated, with numerous irregular dark radiating rays; whorls 3 to 3½, slightly convex, last large, depressed above, descending a little in front, spire slightly elevated, apex obtuse, suture impressed, periphery roundly convex, base convex, smooth, umbilicus large, perspective, regularly rounded at the margin, aperture somewhat oblique, lunately oval, interior pink, peristome simple, thin, margins approximating, columellar margin thinly expanded.

*Diam.* Maj. 4¼, min. 3½, alt. 2, lin.

*Hab.* Palm Island, North-east Coast of Australia.

This species varies in colour from bright chestnut to yellowish-brown, and has dark irregular radiating rays. Ten specimens found.

### 4.—HELIX (THALASSIA) ANNULUS.

Shell minutely perforated, depressed, thin, transparent, smooth, shining olivaceous or yellowish horny, spire moderately conical, apex obtuse, whorls 5, slightly convex, periphery rounded, above banded with one dark-brown band running into the suture and spirally to the apex; base convex, smooth, umbilicus minute, shallow, aperture nearly diagonal, lunate, peristome simple, acute, margins distant, the right thin, the columellar margin whitish, thickened, slightly reflected.

*Diam.* Maj. 6¼, min. 5½, alt. 3, lin.

*Hab.* Banks of Katow River, New Guinea.

This thin transparent species was found at the village of Marrahata, mouth of Katow River, near the seashore, in moist places under cocoanut trees, living in clusters inside of old cocoa husks. Three dead and one living specimen were found at Dungeness Island, Torres' Straits, about 40 miles south from Katow. They may have been carried on drift timber and palm roots which are to be seen floating in the Straits after the North-west Monsoons.

### 5.—HELIX (THALASSIA) SAPPHO.

Shell perforated, orbicularly depressed, thin, sub-pellucid, nearly smooth, glossy, horny, whorls 4½, slightly convex, the last large and rounded at the periphery, suture flattened, spire obtuse, base convex, having striæ running into the umbilicus, aperture diagonal, ovately lunate, peristome thin, margins distant, the upper and outer very thin, columellar margin thickened into a white callus, grooved in the middle, reflected partly over the umbilicus like a spout.

*Diam.* Maj. 3¼, min. 2¾, alt. 1¾ lin.

*Hab.* Yule Island, New Guinea.

A simple horny shell, slightly shining, with a callus like tooth divided, and turned back like a spout.

### 6.—HELIX (DISCUS) LOMONTI.

Shell umbilicated, very much depressed, lenticular, thin, pellucid, light brown, rather obliquely striated, whorls 5½, flattened, the last sharply keeled, suture with narrow margin, base slightly convex, umbilicus large, wide open, aperture diagonal, compressly ovate, peristome thin, acute, margins distant, columella thickened.

*Diam.* Maj. 6, min. 5½, alt. 1½ lin.

*Hab.* Yule Island, New Guinea, found under decayed timber.

A thin, flat, depressed, pellucid, light brown species comes in the section with *Helix Merziana* and *Swainsoni*, Pp.

### 7.—HELIX (CONULUS) MAINO.

Shell minutely perforated, globosely conical, thin, shining, hyaline, pale horny (under the lens), marked with fine oblique silky striæ, and minute spiral lines, whorls 5½, gradually increasing, roundly convex, the last large and inflated, faintly keeled at the periphery, base convexly rounded, with the striæ more coarse than above, aperture nearly vertical, ovate, peristome simple, thin, acute, margins distant, columellar margin reflected covering one-fourth of the minute umbilicus.

*Diam.* Maj. 2, min. 1¾, alt. 2 lin.

*Hab.* Yule Island, New Guinea, found on trees.

The sculpture of this pretty little species comes out beautifully when placed under the microscope, the striæ being as fine as silk. Seventeen specimens only found on trees in the thick jungle.

### 8.—HELIX (CONULUS) REEDEI.

Shell minutely perforated, globosely conical, thin, shining, light brown (under the lens), marked with fine oblique silky striæ, and minute spiral lines, whorls 5, roundly convex, the last large, crenulated at the suture, spire conoid, apex obtuse, obsoletely keeled at the periphery, base convex, pale yellowish horn, marked with spiral striæ, aperture diagonal, roundly lunate, peristome simple, thin, acute, margins distant, columellar margin slightly dilated, covering half the umbilicus.

*Diam.* Maj. 2¼, min. 1¾, alt. 2 lin.

*Hab.* Darnley Island, Torres Straits; found on the leaves of trees on the most elevated peak of the Island.

The upper half of this species is of a light brown, the lower half pale yellowish horn, having the peculiar minute spiral decussating lines giving a fenestrated appearance to the shell.

### 9.—HELIX (CONULUS) DARNLEYENSIS.

Shell imperforated, globosely conical, thin, hyaline, pale horny, faintly marked with silky striæ, rather oblique, whorls 4, roundly convex, the upper one spirally sculptured with fine lines, the last large and inflated, suture deeply impressed, spire conoid, apex obtuse, periphery rounded, base convex, marked with spiral lines, aperture oblique, somewhat ovate, peristome simple, thin, margins distant, columellar rather straight with a thin reflected plate on the imperforation.

*Diam.* Maj. 2½, min. 2, alt. 2 lin.

*Hab.* Darnley Island, Torres Straits; found on trees.

### 10.—HELIX (CONULUS) BARNARDENSIS.

Shell minutely umbilicated, turbinately globose, thin, white, transparent, regularly minutely finely striated, whorls 4, convex, spire conoid, apex obtuse, slightly keeled at the periphery; base convexly rounded, smoother than above, aperture vertical, somewhat squarely ovate, margins distant, the columellar margin dilated and reflected covering one-fourth of the umbilicus.

*Diam.* Maj. 1, min. ¾, alt. 1, lin.

*Hab.* Barnard Islands, No. 3, North-east Coast of Australia.

### 11.—HELIX (CONULUS) NEPEANENSIS.

Shell minutely umbilicated, turbinately depressed, thin, yellowish brown, coarsely obliquely striated, whorls 5, convex, the last large, suture distinct, spire conoid, apex obtuse, small minute callus-like keel at the periphery; base rounded, marked with fine striæ, aperture diagonal, roundly lunar, peristome thin, simple, margins distant, columellar margin rather thickened and slightly reflected.

*Diam.* Maj. 1¾, min. 1½, alt. 1 lin.

*Hab.* Nepean Island, also Cococanut Island, Torres Straits, under leaves on the ground.

This species is allied to *Helix Russelli*, Brazier, but may be distinguished by its coarser sculpture. About forty specimens found at the localities given above.

### 12.—Helix (Conulus) Starkei.

Shell minutely umbilicated, turbinately depressed, thin, reddish-brown, obliquely marked with rib-like striæ, interstices showing faint indications of smaller lines, whorls 5, roundly convex, suture deep, spire somewhat conoid, apex obtuse, periphery minutely keeled, base convex, marked with striæ finer than above and crossed with minute spiral silky lines ; umbilicus deep, rounded at the margin, aperture oblique, roundly lunate, peristome thin, simple, margins distant, columellar nearly straight and reflected.

*Diam.* Maj. 1¾, min. 1½, alt. 1¼ lin.

*Hab.* Yule Island, New Guinea.

One specimen found under decayed leaves on the ground. The sculpture of it is very remarkable, above quite rough rib-like, and from the centre nearly smooth, crossed with fine spiral lines running into the umbilicus.

### 13.—Helix (Patula) Spaldingi.

Shell rather broadly and perspectively umbilicated, depressly orbicular, thin, translucent, not shining, rather white, irregularly obliquely rugosely striated, interstices smooth, spire moderately flattened, apex obtuse, suture deep, whorls 3½, scarcely convex, last rather large and inflated, angled above, rounded at the periphery, base roundly convex, umbilicus half the width of the shell, somewhat deep and rounded at its margins, aperture nearly vertical, sub-circular, peristome thin, acute, margins approximating, the right straight, columellar margin slightly reflected.

*Diam.* Maj. 2¼, min. 1¾, alt. 1¼, least alt. ¾, lin.

*Hab.* Cape York and Albany Island, North Australia ; also Bet, Sue, Cocoa Nut, and Warrior Islands—Torres Straits, under leaves and decayed wood.

This species approaches near to *Helix perspectiva*, Say, found in North America. Cape York and Albany Island specimens run large, from the other islands much smaller.

### 14.—HELIX (CONULUS ?) PORTI.

Shell imperforated, turbinately globose, thin, shining, transparent, horny yellow, regularly marked with very fine oblique striæ, transversely striated, giving the shell the appearance of being granulated; whorls, 3½, roundly convex, spire conoid, apex roundly obtuse, suture distinct, roundly convex at the periphery, base convex, with spinal striæ, aperture diagonal, lunately rounded, peristome thin, acute, margins distant, columellar margin rather thickened into a minute callus plate.

*Diam.* Maj. ¾, min. ½, alt. ¾.

*Hab.* Albany Island, North Australia.

Only one specimen found amongst a vast quantity of volcanic scoria.

### 15.—HELIX (CONULUS ?) GRENVILLEI.

Shell as seen under the lens, imperforated, turbinately depressed, thin, transparent, reddish, spirally striated, whorls 3½, convexly rounded, studded with three rows of spiral stunted hairy bristles, not seen on the upper whorls, rather obliquely rugosely striated at the suture, spire moderately conoid, obtuse at the apex, periphery rounded, base convex, marked with fine striæ, aperture nearly vertical, ovately rounded, peristome thin, simple, acute, margins distant, the right very thin.

*Diam.*, Maj., ¾ min. ½ alt. ½ lin.

*Hab.* Home Islands, off Cape Grenville, North East Australia.

Characterised by bristly hair on the centre of the last whorl, and resembles, in miniature, the *Helix aculeata*, Muller, from Europe. One specimen only found under leaves.

### 16.—HELIX (OCHTHEPHILA) D'ALBERTISI.

Shell umbilicated, pyramidally conical, thin, light reddish brown, hyaline, spire raised, apex white, acute, whorls 8½, slightly convex, the upper half closely, obliquely, rugosely lined, the lower spirally granulated, suture channeled, crenulated, below small minute holes, having raised like callus at their edge, periphery with small keel, divided and crenulated, base convex, more rugose than upper surface, umbilicus rounded, small, and deep, minute holes round the edge, aperture oblique, nearly circular, peristome thin, margins continuous, with thin deposit of callus on the body whorl; columellar margin slightly reflected over the umbilicus.

*Diam.* Maj. 3¾, min. 3½, alt. 4 lin.

*Hab.* Yule Island, New Guinea.

### 17.—HELIX (HADRA) PALMENSIS.

Shell umbilicated, globosely turbinated, finely striated, the whole surface marked with minute zig-zag and lengthened grains, giving the shell a granulated appearance, reddish yellow, with numerous spiral chestnut lines and bands, very dark at the mouth, whorls 6, slightly convex, the last convex above, deflected in front, suture crenulated and encircled with a dark blackish band; spire conical, apex obtuse, base rounded, marked as above, having coarser lines entering the umbilicus, with a dark broad band round it, aperture somewhat diagonal, ovately lunate, within shining livid hue, peristome blue-black, thick, and broadly expanded and reflected, margins approximating, the right descending at the upper part, and connected by a thin callus; columellar margin very much thickened and expanded half over the umbilicus.

*Variety.* Yellowish, with one band one line wide on the periphery, running spirally to the apex, with another broad one at the suture, nearly obsolete on the second whorl, peristome lightish brown, very dark behind, dark reddish brown round the umbilicus.

*Diam.* Maj. 23, min. 18, alt. 17 lines.

*Hab.* Palm Island, North-east Australia; found under stones and rocks in the thick jungle.

### 18.—HELIX (GEOTROCHUS) YULENSIS.

Shell imperforated, conic, trochus shaped, rather thin, obliquely finely striated and obsoletely granulated; whitish, ornamented with small long narrow light reddish streaks and spots, more numerous towards the upper part, spire conoid, rather acute, whorls 4 to 4½, slightly convex, the last more convex, marked round the periphery, which is acute with a broad white opaque band, base convex, with obsolete white bands, interior and columellar pink, peristome jet black, aperture oblique, triangularly ovate, margins approaching, right bisinuated and contracted in front, thickened and reflected.

*Diam.* Maj. 10½, min. 8¼, alt. 6.

*Hab.* Yule Island, New Guinea.

This interesting species differs from anything known to me from New Guinea, it is so variable in colour. Some specimens have the light reddish streaks obliquely placed, and destitute of the opaque white lines running spirally inwards on the body whorl and the fine rose tint round the columellar and interior of the aperture; peristome at the periphery twisted and bisinuated inwards.

### 19.—HELIX (GEOTROCHUS) STRABO.

Shell imperforated, conic, somewhat trochus shaped, thin, finely striated, and obsoletely spirally marked with lengthened granulations; bright straw yellow, spire conoid, apex acute, whorls 4; slightly convex, the 3 upper nearly smooth, suture channelled, periphery sharply keeled, rounded in front, base convex and marked with faint white opaque lines; aperture oblique, triangularly ovate, peristome expanded and reflected, rose pink, margins distant, the right bisinuated inwards at the front, columellar margin regular and reflected.

*Diam.* Maj. 11, min. 8¼, alt. 6½ lin.

*Hab.* Katow River, New Guinea; found on trees.

This is another curious form, having the centre or outer margin of the peristome bright rose colour and formed like a spout, and between the margins and on the base a faint blotch of rose pink. Only three specimens found on the banks of the above river.

### 20.—HELIX (GEOTROCHUS) SICULUS.

Shell narrowly umbilicated, depressly globose, rather solid, finely striated, pale brown, ornamented with three chestnut bands, two narrow and one broad contiguous to that at the suture; spire conoid, apex dark brown, obtuse, whorls 5, slightly convex, rounded at the periphery, convex at the base, ornamented with eight narrow spiral chestnut lines; aperture diagonal, roundly lunate, peristome rose pink, slightly expanded and reflected, columellar dilated and reflected, concealing one-fourth of the umbilicus.

*Variety.* With chestnut band on the periphery, and running spirally round the suture to the apex.

*Diam.* Maj. 10, min. 8, alt. 6½ lines.

*Hab.* Banks of Katow River, New Guinea.

Two specimens only found of this species on trees.

### 21.—HELIX (GEOTROCHUS) BRAZIERÆ.

Shell with covered umbilicus, depressly conical, rugosely obliquely and spirally striated, yellowish-brown, marbled with blackish-brown flames, whorls 4 to 4½, convex, the last large, descending in front, apex conoid, obtuse, upper whorl nearly smooth, brown, periphery moderately rounded, base convex, marked as above, aperture oblique, lunately ovate, peristome white, thickened and reflected, interior of aperture bright brown, margins approximating, the right descending, columellar margin thickened, dark-brownish and expanded over the umbilicus.

*Diam.* Maj. 13, min. 10½, alt. 8½ lin.

*Hab.* Yule Island, New Guinea, found on trees.

This species resembles in its markings *Helix Lombei*, Pfr. from Solomon Islands.

### 22.—HELIX (GEOTROCHUS) ZENO.

Shell imperforated, globosely turbinated, obliquely and transversely minutely rugosely grained, thin, flesh colour, encircled with eleven dark-brown bands having white between; in front all run into one, spire short, apex obtuse, rose pink, whorls 4½, convex, the last large, deflected in front, constricted behind the aperture, which is oblique and somewhat square, peristome purple black, margins approximating, and joined by a thin callus, the right descending, collumellar margin with sub-erect elongated tooth like callosity of a rose pink much dilated and reflected.

*Diam.* Maj. 17, min. 13½, alt. 1¼ lin.

*Hab.* Hall Sound, New Guinea.

Two dead specimens found in the thick forest on high ridges.

### 23.—BULIMUS MACLEAYI.

Shell minutely perforated, ovately conical, very thin, shining, transparent, finely striated and obsoletely transversely lined, horny or tawny throughout, whorls 5½, convex, the last large and inflated little more than half the whole length, spire rather long, apex acute, base rounded, aperture somewhat oblique, elongately oval, peristome simple, regular, thin, nearly straight, margins regularly arched, collumellar margin with thin plate expanded and reflected over the umbilicus.

Length 7½, breadth 4, height 3½, length of aperture 4¼, width 2¾ lines.

*Hab.* Yule Island, New Guinea.

This species is found on trees in the wet season, and in the dry in the crevices of coral forming the east side of the island.

### 24.—TORNATELLINA MASTERSI.

Shell imperforate, somewhat ovate, very thin, transparent, slightly shining, horny green, faintly and transversely striated, whorls 5, convex, that last large and inflated, equalling half the length, suture impressed, spire conoid, apex obtuse, base rounded, aperture vertical, ovate, peristome thin, simple, long, narrow, minute-like callus tooth on the centre of the body whorl; whitish, margins regularly arched, the columellar margin white, thickened with callus, twisted, divided in the middle and entering spirally inwards, leaving a deep groove; above reflected at its outer edge.

Length 1¼, breadth ¾ line.

*Hab.* Darnley Island, Torres Straits.

This species is of a very dull colour, more so than any of the other species described in this paper. Eighteen specimens found on trees at 600 feet elevation, the highest part of the island.

### 25.—TORNATELLINA GRENVILLEI.

Shell imperforated, oblong, ovate, thin, glossy, transparent, light horn colour, obliquely striated, decussated with minute silky lines; whorls 5, roundly convex, suture distinctly impressed, spire conoid, apex obtuse, base convex, aperture somewhat diagonal, elongately oval, peristome thin, simple, straight, margins regularly arched, the columellar margin thickened with callus, twisted, reflected and running spirally inwards, joining the thin white lunate-shaped tooth placed in the body whorl.

Length 1½, breadth ¾ line.

*Hab.* Home Islands, North East Australia; Albany Island, Cape York.

### 26.—TORNATELLINA PETTERDI.

Shell imperforate, oblong turreted, very thin, transparent, shining, smooth, light yellowish horny, whorls 5, convex, last equalling half the length, spire moderately elongated, obtuse at the apex, aperture nearly vertical, ovate, small thin tooth placed in the centre of the body whorl; columellar thickened, twisted, the edge entering spirally inwards leaving a deep groove above, peristome thin, simple.

Length 1½, breath 1 line.

*Hab.* Darnley Island, Torres Straits; found on trees.

### 27.—TORNATELLINA TERRESTRIS.

Shell imperforated, overtly conical, thin, translucent, rather smooth, obsoletely striated and spirally lined with silky striæ; pale horny, whorls 3½, roundly convex, the last large and globosely inflated, suture impressed, spire short, obtuse at the apex, aperture very slightly oblique, roundly ovate, small nearly obsolete thin long tooth on the centre of the body whorl; peristome thin, acute, margins regular, the columellar rather thickened, straight, with a thin long broad plate, sub-twisted and bent in the centre entering spirally inwards, as seen from the inside, fine decussating lines all through.

Length 1½, breadth 1 line.

*Hab.* Yule Island, New Guinea; found on the ground under leaves.

### 28.—TORNATELLINA EUCHARIS.

Shell imperforated, somewhat ovately conical, thin, transparent, glossy, very finely striated and decussated with finer striæ; pale straw colour, whorls 3½, convex, the last large and inflated, three-fourth the whole length, spine very short, apex roundly obtuse, thickened long callus tooth on the centre of body whorl entering spirally; base rounded, aperture nearly vertical, ovate, peristome membranous, margins regular, the outer arched, columellar twisted, rather thickened, entering spirally inwards, leaving about it a small groove.

Length 1¼, breadth 1 line.

*Hab.* Barnard Islands No. 3, North-East Australia.

This graceful species is closely allied to *Tornatellina terrestris* Braz., two specimens found on bushes at the above Islands.

### 29.—PUPA (VERTIGO) MACLEAYI.

Shell sinistral, perforated, ovately oblong, very thin, shining, white, hyaline, finely striated, crossed with spiral striæ, whorls 5, convexly rounded, two centre large and ventricose, two upper small, the last very small, somewhat compressed; aperture small, squarely oval, longer than broad, having 7 teeth, 3 on the centre of the body whorl, the centre one elongated curved and rounded, small one to the right and left, one long and broad on the inside of the columella, three more situated inside the base, centre one deep down opposite the one on the body whorl; margins continuous, the right slightly angled at the suture, joining the minute tooth above, peristome thin and reflected, broadly expanded over the perforation.

Length 1, breadth ½ line.

*Hab.* Bet, Sue, Nepean, Dungeness, and Warrior Islands, Torres Straits.

### 30.—PUPINA CROSSEI.

Shell oblong, ovate, solid, polished, shining, pellucid, smooth, glossy, white or reddish horny, whorls 5, moderately convex, the last in front small, penultimate little more than equal to those above, aperture circular, vertical, produced rather obliquely out wards; peristome and auricles white, thickened, slightly expanded, the upper oblique, with narrow cut to the suture, covered by a large curved somewhat triangular callus plate, extending to the centre of the whorl, deflected at the edge, the lower canal cutting the columellar horizontally, having a small impressed plate above.

Length 3¼, breadth 2, height 1¾, aperture 1 line.

*Hab.* Palm Island, North-East Australia.

The auricle at the upper part of the lip is the chief character in this species; it is cut to the suture, and the auricle extends up to the centre of the penultimate whorl. It and *Pupina Thomsoni* Forbes, need never be confounded with any other Australian species. Four specimens found under decayed leaves, in wet ground.

### 31.—PUPINELLA CROSSEI.

Shell perforated, ovately oblong, rather thick, smooth, whitish to pale reddish horny, very finely striated, whorls 6 to 6½, convexly rounded, suture deep, spire tapering, obtuse at the apex, aperture nearly vertical, circular, peristome continuous, with callus deposit on the upper front, outer lip very much thickened, reflected white, columellar slightly produced in the centre, having a small narrow fissure nearly horizontal and entering spirally; umbilicus small, bordered below by a well marked obtuse keel continuous with the spiral canal.

Length 6, breadth 2¼, height 2¼, aperture 1¼ lines.

*Hab.* Yule Island, New Guinea.

This species is characteristic of the genus, having a narrow spiral canal at the base of the columellar, and the umbilicus bordered with an obtuse keel, which forms the outside of the narrow canal at the base of the columellar; it reminds one of the genus *Cataulus*, with its keel. Named after Mr. H. Crosse, of Paris, Director of the French *Journal de Conchyliologie.*

### 32.—HELICINA COXENI.

Shell trochiform, rather solid, reddish, marbled with opaque white, spirally rugosely striated, whorls 4½, flattened, the last large, somewhat angular in front, spire conoid, apex rather acute, periphery carinated, more distinctly in front on body whorl; base convex, with finer lines, interior reddish brown, aperture diagonal, triangular, peristome white, thickened, shortly expanded, angular above, roundly. produced in front, rounded below, joining the columellar, which is rather straight, having a callus deposit.

*Diam.* Maj. 5½, min. 4½, alt. 4 lin.

*Hab.* Yule Island, New Guinea, found under leaves on the ground.

### 33.—HELICINA MACLEAYI.

Shell depressly globose, rather solid, somewhat rugosely striated, having obsolete spiral ribs, intersected by minute decussating lines, bright yellowish reddish or reddish brown, whorls 4½, slightly convex, the last obscurely angled, suture deep, spire short, apex papillose smooth, periphery slightly carinated, base with finer striæ, aperture diagonal, triangularly ovate, peristome white, thickened and reflected, the columellar margin thickened with a granulated deposit on the body whorl nearly extending up to the right margin of the peristome; operculum light brown, concave, minutely granulated, inner edge very much thickened, outer thin.

*Diam.* Maj. 2, min. 1¾, alt. 1½ to 1¼ lin.

*Hab.* Barnard Islands, No. 3, North-East Australia, found near the beach under dead leaves and broken coral.

### 34.—HELICINA MAINO.

Shell conoid, thin, shining, glossy, transparent, flesh colour, having fine zig-zag white opaque lines with bright reddish streaks spirally striated; whorls 4½, flattened, the last equalling more than half the whole length, suture moderately impressed, spire conoid, apex pointed and granulated, periphery rounded, base convex, more opaque than above, with thin granulated callus between the margins, aperture oblique, somewhat triangular, peristome granulated, slightly thickened and reflected, white, roundly produced in front, triangular at the columellar which is thickened, interior light reddish; operculum yellowish brown, concave in centre, surface granulated.

*Diam.* Maj. 3, min. 2½, alt. 2½ lin.

*Hab.* Katow, New Guinea, only one specimen found.

### 35.—CYCLOPHORUS (DITROPIS) BEDDOMEI.

Shell sub-orbicular, depressed, thin, whitish brown, striæ rather rugose, whorls 3½, the last large and flattened in front, having two distinct spiral keels, one above the periphery and contiguous to the suture, the other below, leaving a passage between them; the upper whorls smooth and convex, spire short, apex obtuse, base angular, umbilicus wide and deep, encircled with a keel, and having one well down, aperture oblique, somewhat circular, peristome thickened, brown, margins approximating and joined by a thin callus plate, the right or upper considerably thickened, the basal margin produced outwardly, columellar hollowed out and slightly reflected at the umbilicus.

*Diam.* Maj. ¾, min. ⅔, alt. ½ lin.

*Hab.* Cape York, North Australia.

This species differs from *Cyclophorus Whitei*, Brazier, by being more depressed, the keels only being contiguous to the suture of the last whorl, and in the upper whorls being smooth, and the peristome thicker; it is in all respects a smaller shell.

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## Notes on a collection of geological specimens collected by WILLIAM MACLEAY, Esq., F.L.S., President of the New South Wales Linnean Society, Sydney, from the coasts of New Guinea, Cape York, and neighbouring islands—by C. S. WILKINSON, Government Geologist.

I have lately examined a small collection of geological specimens, brought from the coast of New Guinea, by the President of this Society, Mr. William Macleay, and which were collected by him when on his recent tour of exploration in the Chevert.

These specimens consist of—

1. Quartz porphyry (Palæozoic), from Cape York, found underlying beds of Tertiary ferruginous sandstone.
2. Vesicular basalt and brecciated volcanic tufa (Upper Tertiary), from Darnley Island.

3. Small concretions of limonite, with polished looking surfaces, dredged up off the coast of New Guinea.
4. Specimens of chalcedony and flint, from Hall's Sound.
5. Oolite limestone (Tertiary), very friable, from Bramble Bay.
6. Yellow calcareous (Tertiary), clay, from Katau River.
7. Yellow and blue calcareous clays (Tertiary), from Yule Island and Hall's Sound.

It is with reference more particularly to the fossiliferous clays that I would offer a few remarks.

These clays, as indicated by the fossils contained in them, belong to the Lower Miocene Tertiary period.

So far as I am aware, this is the first notice of such fossils having been discovered in New Guinea; and this discovery of Mr. Macleay's is the more interesting inasmuch as the Miocene *marine* beds, which occupy a considerable area in Victoria and South Australia, have nowhere been found on the eastern coast of Australia, north of the Victorian border—Cape Howe. Referring to this fact the Rev. W. B. Clarke says that, "throughout the whole of Eastern Australia, including New South Wales and Queensland, no Tertiary *marine* deposits have been discovered."

The comparison of this Miocene fauna from a locality so near the Equator, with that from higher latitudes, will be important work for a palæontologist.

Professor M'Coy has already gone far to prove from the comparison of certain Miocene fossils, that the fauna of the Older Tertiary period in Australia was not so restricted in its geographical range as it now is, but was then closely related generically, and even specifically, to many parts of Europe and America. And I think that, perhaps, even the few fossils now before us may afford some additional evidence in confirmation of the views of that eminent Palæontologist.

The Miocene clay beds of New Guinea, judging from the specimens collected by Mr. Macleay, are exactly similar in lithological character to the Lower Miocene beds near Geelong, and on the Cape Otway coast in Victoria.

The fossils from Hall's Sound are unfortunately not in a good state of preservation, being mostly imperfect casts; but amongst them appear to be the following genera:—

*Voluta macroptera*, a small specimen; *Voluta anti-cingulata, Ostrea, Cytheræa, Crassatella? Pecten, Turritella, Natica, Triton? Dolium? Astarte, Corbula, Læda, Venus, Cypræa,* 2 *Echinoderms.*

Most of the above I have found in the Victorian beds, and two of them have been figured and described by Professor McCoy in his *Decade No.* 1 *of the Palæontology of Victoria.*

The small specimen of calcareous clay from the Katau River on the west side of the Gulf of Papua contains only a few broken fragments of shells; but it appears to be of the same formation as the clay beds of Hall's Sound or Yule Island.

The oolitic limestone of Bramble Bay I believe to be also of the upper beds of this Miocene formation.

Mr. Macleay, in his letter to the *Sydney Morning Herald* of October 11, 1875, describes the formation of Yule Island as a sedimentary rock, nearly horizontal on the sea face, but with a great dip inwards. The rock itself is calcareous, and composed of corals, shells, echini, &c.—in fact a concrete of fossils resembling the coral rag of Oxford. Mr. D'Albertis also gives a similar description of the formation of Yule Island, and mentions the occurrence of basaltic trap in the valleys, and that the higher portions of the hills, which attain a height of 700 or 800 feet above sea level, are composed of coralline limestone. It is worthy of remark that in Victoria the Miocene strata occur in a similar manner—yellow and blue calcareous clays full of fossil shells, overlaid by thick beds of coralline limestone consisting of an aggregate of comminuted fragments of corals, shells, and echinoderms.

The discovery of these Miocene beds on the southern coast of New Guinea is one of considerable importance. Their occurrence, I believe, suggests the former land-connection of New Guinea with the Australian continent, and this belief is further borne out by the fact of the shallowness of the intervening sea. I am not aware that any Miocene rocks have yet been identified as such on the northern coast of the Cape York Peninsula; but it is not improbable that the ferruginous sandstone described by Mr. Macleay as overlying the porphyritic granite at Cape York, and perhaps other Tertiary deposits which may occur in that locality, may be correlated with the Miocene beds on the opposite coast of New Guinea.

Wallace, referring to this subject in his very interesting and valuable work, *The Malay Archipelago*, says:—"It is interesting to observe among the islands themselves how a shallow sea always intimates a recent land connection." . . . "We find that all the islands from Celebes and Lombock eastward exhibit almost as close a resemblance to Australia and New Guinea as the Western Islands do to Asia." And again—"Australia, with its dry winds, its open plains, its stony deserts, and its temperate climate, produces birds and quadrupeds which are closely related to those inhabiting the hot damp luxuriant forests which everywhere clothe the plains and mountains of New Guinea."

Baron von Mueller's remarks on some of the Papuan plants collected by Mr. Macleay are also evidence in favour of the former land connection of New Guinea with Australia, so that our geological evidence is supported by that of zoology and botany.

From geological data it is believed that this continent has not been submerged to any great extent since the Lower Pliocene period; and we know that it has risen a little since the Upper Pliocene epoch, at least in Victoria, for the lava flows of that age, now forming the Werribee Plains, were *submarine* flows. And Mr. Daintree, formerly Government Geologist of Queensland, shows, in his pamphlet on the *Geology of Queensland*, that little upheaval of this portion of Australia has taken place since the volcanic outbursts of a late Tertiary epoch. Now, it is in the Upper Pliocene or Pleistocene deposits that are found the remains of the gigantic marsupials — *Diprotodon*, *Macropus titan*, *Nototherium*, and others; and, as their allied representatives, now occupy both Australia and New Guinea, it is not improbable that those gigantic animals, whose bones are found in Northern Queensland, also roamed in both those countries. And, further, as the luxuriant vegetation and climatic conditions which we suppose to be favourable for the support of those immense marsupials, still exist in New Guinea, is it rash to conjecture that some of these large creatures may not be living there at the present time? Further researches may prove this.

I will conclude with the following very apposite extract from Wallace's *Malay Archipelago*:—

"From this outline of the subject, it will be evident how important an adjunct natural history is to geology; not only in interpreting the fragments of extinct animals found in the earth's crust, but in determining past changes in the surface which have no geological record. It is certainly a wonderful and unexpected fact, that an accurate knowledge of the distribution of birds and insects should enable us to map out lands and continents which disappeared beneath the ocean long before the earliest traditions of the human race. Wherever the geologist can explore the earth's surface, he can read much of its past history, and can determine, approximately, its latest movements above and below sea level; but, wherever oceans and seas now extend, he can do nothing but speculate on the very limited data afforded by the depth of the waters. Here the naturalist steps in, and enables him to fill up this great gap in the past history of the earth."

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## MONDAY, 27TH MARCH, 1876.

CAPTAIN STACKHOUSE, in the Chair.

### MEMBERS ELECTED.

Eyre Goulburn Ellis, and E. Reading, Esqrs.

The following paper was read:—

## List of Land Shells collected during the Chevert Expedition by JOHN BRAZIER, C.M.Z.S.

### 1.—HELIX (THALASSIA) RUSTICA.

*Helix rustica*, Pfr. in Zeitscher, f. Malak, 1852, p. 112.
„ „ Pfr. Mon. Helic Viven, 1853, vol. 3, p. 63.

*Helix impexa*, Reeve Conch Icon, 1852, sp. 795.

„ *Crotali*, Cox, Catalogue of Australian Land Shells, 1864, p. 18.

„ *rustica*, Cox, Monog. Aust. Land Shells, 1868, p. 2, pl. 9, fig. 3.

*Hab.* Barrow and Palm Islands, North-east Coast of Australia.

### 2.—HELIX (THALASSIA) YORKENSIS.

*Helix Yorkensis*, Pfr. Proc. Zool, Soc., 1854, p. 145.

„ „ Pfr. Mon. Helic Viven, 1859, p. 29.

„ „ Reeve, Conch Icon, 1854, sp. 1372.

„ „ Cox, Monog. Aust. Land Shells, 1868, p. 34, pl. 9, fig. 8.

*Hab.* Cape York, North Australia; also Palm Island, North-east Coast.

### 3.—HELIX (THALASSIA) VILLARIS.

*Helix villaris*, Pfr. Proc. Zool. Soc., 1854, p. 146.

„ „ Pfr. Mon. Helic Viven, 1859, p. 47.

„ „ Reeve, Conch Icon., 1854, sp. 1375.

„ „ Cox, Monog. Aust. Land Shells, 1868, p. 2, pl. 10, fig. 8.

*Hab.* Cape York and Albany Island, North Australia.

### 4.—HELIX (THALASSIA) KREFFTI.

*Helix Kreffti*, Cox, Catalogue of Australian Land Shells, 1864, p. 21.

„ „ Pfr. Mon. Helic Viven, 1868, p. 243.

*Helix villaris*, Cox, Non-Pfr. Monog. Aust. Land Shells, 1868, p. 2.

*Hab.* Darnley Island, Torres Straits.

This species is larger than *Helix villaris* Pfr. The original specimens of *Helix Kreffti* in Dr. Cox's collection, though said to come from Cape York, are I believe, really from Darnley Island.

### 5.—HELIX (THALASSIA) ANNULUS.

*Helix* (*Thalassia*) *annulus*, Brazier. Proc. Linn. Soc., N.S.W., page 100.

*Hab.* Katow River, New Guinea; also Dungeness Island, Torres Straits.

### 6.—HELIX (THALASSIA) SAPPHO.

*Helix* (*Thalassia*) *Sappho*, Brazier. Proc. Linn. Soc. N.S.W., page 100.

*Hab.* Yule Island, New Guinea.

### 7.—HELIX (THALASSIA) *sp.* ?

*Hab.* Cape York and Albany Island, North Australia.

### 8.—HELIX (THALASSIA) *sp.* ?

*Hab.* Mount Earnest Island, Torres Straits.

This species comes near *Helix Kreffti*, Cox. The specimens obtained were collected by Mr. Beddome at the above locality and given to me when at Cape York to be placed in the collection.

### 9.—HELIX (THALASSIA) *sp.* ?

*Hab.* Barnard Islands, No. 3, North-east Coast of Australia.

This species is allied to *Helix rustica* Pfr., but much flatter with a broad margin at the suture.

### 10.—HELIX (THALASSIA) *sp.* ?

Six specimens of this species was found, but all dead and destitute of colour.

### 11.—HELIX (DISCUS) LOMONTI.

*Helix* (*Discus*) *Lomonti* Brazier. Proc. Linn. Soc., N.S.W. page 101.

*Hab.* Yule Island, New Guinea.

### 12.—HELIX (CONULUS) TURRICULATA.

*Helix turriculata*, Cox. Proc. Zool. Soc., 1867, p. 724.

*Helix turriculata* (Conulus), Cox, Monog. Aust. Land Shells, 1868, p. 8, pl. 8, fig. 11.

*Hab.* Barnard Islands No. 3, North-east Coast of Australia.

### 13.—HELIX (CONULUS) ELLERYI.

*Helix* (*Conulus*) *Elleryi* Brazier. Transactions Royal Soc. N.S.W. 1874, p. 29.

" " " " Proc. Zool. Soc., 1874, p. 668, pl. 83, figs. 3 and 4.

*Hab.* Barnard Islands No. 3, North-east Coast of Australia.

### 14.—HELIX (CONULUS) RUSSELLI.

*Helix* (*Conulus*) *Russelli* Brazier. Transactions Royal Soc. N.S. W. 1874, p. 29.

" " " " Proc. Zool. Soc. 1874, p. 668, pl. 83, figs. 13 and 14.

*Hab.* Barnard Islands No. 3, Home Islands, North-east Australia; Cape York, North Australia; Bet and Darnley Islands, Torres Straits.

### 15.—HELIX (CONULUS) MAINO.

*Helix* (*Conulus*) *Maino* Brazier. Proc. Linn. Soc. N.S.W., page 101.

*Hab.* Yule Island, New Guinea.

### 16.—HELIX (CONULUS) REEDEI.

*Helix* (*Conulus*) *Reedei* Brazier. Proc. Linn. Soc. N.S.W., page 101.

*Hab.* Darnley Island, Torres Straits.

### 17.—HELIX (CONULUS BARNARDENSIS.)

*Helix* (*Conulus*) *Barnardensis* Brazier. Proc. Linn. Soc. N.S.W., page 102.

*Hab.* Barnard Islands No. 3, North-East Australia.

### 18.—HELIX (CONULUS) NEPEANENSIS.

*Helix* (*Conulus*) *Nepeanensis*, Brazier. Proc. Linn. Soc. N.S.W., page 102.

*Hab.* Nepean and Cocoanut Islands, Torres Straits.

### 19.—HELIX (CONULUS) STARKEI.

*Helix* (*Conulus*) *Starkei*, Brazier. Proc. Linn. Soc. N.S.W., page 103.

*Hab.* Yule Island, New Guinea.

### 20.—HELIX (CONULUS) PAMPINI.

*Helix* (*Conulus*) *pampini* Cox. Monog. Aust. Land Shells 1868, p. 111, pl. 19, fig. 9.

*Hab.* Palm, Fitzroy, and Barnard Islands, North-East Australia; Albany Island and Cape York, North Australia.

### 21.—HELIX (CONULUS ?) PORTI.

*Helix* (*Conulus* ?) *Porti*, Brazier. Proc. Linn. Soc. N.S.W., page 104.

*Hab.* Albany Island, North Australia.

### 22.—HELIX (CONULUS ?) GRENVILLEI.

*Helix* (*Conulus* ?) *Grenvillei*, Brazier. Proc. Linn. Soc. N.S.W., page 104.

*Hab.* Home Islands, North-East Australia.

### 23.—HELIX (PATULA) SPALDINGI.

*Helix* (*Patula*) *Spaldingi*, Brazier. Proc. Linn. Soc. N.S.W., page 103.

*Hab.* Cape York and Albany Island, North Australia; Bet, Sue, Cocoanut, and Warrior Islands, Torres Straits.

### 24.—HELIX (RHYTIDA) BEDDOMEI.

*Helix* (*Rhytida*) *Beddomei*, Brazier. Proc. Linn. Soc. N.S.W., page 98.

*Hab.* Cape York and Albany Island, North Australia.

### 24a.—HELIX (RHYTIDA) FRANKLANDIENSIS.

*Helix Franklandiensis*, Forbes. Voyage H.M.S. Rattlesnake, App. p. 379, pl. 2, fig. 2.

„ „ Pfr. in Mon. Helic, Viv. 1853, vol. 3, p. 103.

„ „ „ „ „ 1868, vol. 5, p. 166.

„ „ (PATULA) Cox Monog. Austr. Land Shells, p. 27, pl. 3, fig. 7.

*Hab.* Fitzroy Island, North-East Coast of Australia.

### 25.—HELIX (RHYTIDA) JAMESI.

*Helix* (*Rhytida*) *Jamesi*, Brazier. Proc. Linn. Soc. N.S.W., page 99.

*Hab.* Palm Island, North-East Australia.

### 26.—HELIX (RHYTIDA) HOBSONI.

*Helix* (*Rhytida*) *Hobsoni*, Brazier. Proc. Linn. Soc. N.S.W., page 99.

*Hab.* Palm Island, North-East Australia.

### 27.—HELIX (RHYTIDA) *sp.*?

*Hab.* Palm Island, North East Australia.

This species may prove to be only a variety of *Helix Strangei;* two specimens found.

### 28.—HELIX (RHYTIDA) *sp.*?

*Hab.* Brooke Island, North-East Australia.

Of this species only one was found; too young to identify.

### 29.—HELIX (DORCASIA) DUNKIENSIS.

*Helix Dunkiensis*, Forbes. Voy. Rattlesnake, App. p. 378, pl. 2, fig. 7.

„ „ Reeve, Conch. Icon. sp. 756.

„ „ Pfr. Mon. Helic. Viven., 1853, vol. 3, p. 224.

„ „ (GALAXIAS) Cox, Monog. Austr. Land Shells, 1868, p. 43, pl. 8, fig. 9.

*Hab.* Brooke Island, North-East Australia.

### 30.—HELIX (DORCASIA) ARIDORUM.

*Helix avidorum*, Cox, Proc. Zool. Soc. 1867, p. 924.

„ (*Galaxias*) *aridorum*, Cox, Monog. Austr. Land-Shells, 1868, p. 44, pl. 11, fig. 16, 16a.

*Hab.* Fitzroy Island, North-East Australia.

### 31.—HELIX (OCHTHEPHILA) D'ALBERTISI.

*Helix* (*Ochthephila*) *D'Albertisi*, Brazier, Proc. Linn. Soc., N.S.W., page 104.

*Hab.* Yule Island, New Guinea.

### 32.—HELIX (TRACHIA) ENDEAVOURENSIS.

*Helix* (*Trachia*) *Endeavourensis*, Brazier Proc. Zool. Soc. 1871. page 640.

*Helix Endeavourensis* (TRACHIA) Pfr. in Mon. Helic. Viv. 1875, vol. 7, p. 427.

*Hab.* Mount Adolphus Island, near Cape York, North Australia.

The specimens in the collection were received from Mr. Beddome, when the Chevert was at Cape York.

### 33.—HELIX (TRACHIA) DELESSERTIANA.

*Helix Delessertiana*, Le Guillou Revue Zool. 1842, p. 138.

„ „ Pfr. in Mon. Helic. Viv. 1853, vol. 3, p. 157.

„ „ (VALLONIA) Cox, in Monog. Austr. Land-Shells, 1868, p. 61, pl. 5, figs. 8a, 8b.

*Hab.* Cape York and Albany Island, North Australia; Bet Sue, Cocoa Nut, Dungeness, and Darnley Islands, Torres Straits.

### 34.—HELIX (TRACHIA) TUCKERI.

*Helix Tuckeri*, Pfr. Mon. Helic Viv. 1848, vol. 1, p. 364.
„ „ „ 1853, vol. 3, p. 236.
„ „ „ 1875, vol. 7, p. 428.
„ Pfr. Reeve, Conch. Icon. sp., 633.

„ *Strangulata*, Hombr. et Jacq. Voy. Pol. Sud. Moll, fig. 1, 4.

*Hab.* Cape Grenville, North-East Australia, eight specimens found. Albany Island, North Australia, twenty-eight found in the crevices of stones. Sue and Cocoa Nut Islands, Torres Straits, two found at each island.

### 35.—HELIX (TRACHIA) CYCLOSTOMATA.

*Helix cyclostomata*, Le Guill. Rev. Zool., 1842, p. 141.
" " Pfr. in Mon. Helic Viv. 1848, vol. 1, p. 378.
" " " " 1853, vol. 3, p. 241.
" " " " 1875, vol. 7, p. 441.
" " (VALLONIA) Cox, Monog. Austr. Land Shells, 1868, p. 61, pl. 10, fig. 12.

*Hab.* Palm Island, North-East Australia, three specimens found; Cape York, fifty found; Albany Island, six hundred found; Cape Grenville, North-East Coast, eight found; Bet, Sue, and Warrior Islands, Torres Straits, thirty-three found.

### 36.—HELIX (HADRA) BIPARTITA.

*Helix bipartita*, (HELICELLA) Fer. hist. t. 75 A. f. 1.
" " Pfr. in Mon. Helic. Viv. 1848, vol. 1, p. 319.
" " Reeve, Conch. Icon. sp. 359.
" " (CAMAENA) Cox, Monog. Austr. Land-Shells, p. 54, pl. 5, fig. 7.

*Helix Semibadia* Albers.

*Hab.* Cape Grenville, North-East Australia, Cape York, and Albany Island, North Australia.

### 37. HELIX (HADRA) SEMICASTANEA.

*Helix semicastanea*, Pfr. Mon. Helic Viv. 1853, vol. 3, p. 222.
" " Reeve Conch. Icon. sp. 1348.
" " Albers Heliceen, ed. 2, p. 165.

*Hab.* Darnley, Sue, Bet, Warrior, Dungeness, Long, Nepean, and Cocoa Nut Islands, Torres Straits.

### 38.—HELIX (HADRA) PALMENSIS.

*Helix (Hadra) Palmensis*, Braz. Proc. Linn. Soc., N.S.W., page 105.

*Hab.* Palm Island, North East Australia.

### 39.—HELIX (HADRA) COOKENSIS.

*Helix* (*Hadra*) *Cookensis*, Brazier. Proc. Linn. Soc., 1875, p. 17.

*Hab.* Brooke Island, North East Australia.

### 40.—HELIX (HADRA) *sp.*?

*Hab.* Brooke Island, North East Australia.

Allied somewhat to *Helix Palmensis*, Braz. Only one specimen found, and in a dead state.

### 41.—HELIX (HADRA) FORSTERIANA.

*Helix Forsteriana*, Pfr. Proc. Zool. Soc., 1851, p. 254.
„ „ Pfr. Mon. Helic Viv. 1853, vol. 3, p. 153.
„ „ „ „ „ 1868, vol. 5, p. 377.
„ „ „ Cox, Monog. Aust. Land Shells, pl. 4, fig. 8.
„ „ „ Reeve, Conch. Icon., sp. 439.
„ *Hetaera*, Pfr. Proc. Zool. Soc., 1860, p. 135.
„ „ „ Mon. Helic Viv., 1875, vol. 7, p. 377.

*Hab.* Barrow Island, North East Australia.

### 42.—HELIX (GEOTROCHUS) MACGILLIVRAYI.

*Helix Macgillivrayi*, Forbes' Voyage H.M.S. Rattlesnake, App., p. 377, pl. 3, fig. 1.
„ „ Pfr. in Mon. Helic Viv., 1853. vol. 3, p. 168.
„ „ „ Reeve, Conch. Icon., 357.
„ „ (THERSITES) Cox, Monog. Austr. Land Shells, p. 62, pl. 2, fig. 12.

*Hab.* Fitzroy Island, North East Australia.

### 43.—HELIX (GEOTROCHUS) YULENSIS.

*Helix* (*Geotrochus*) *Yulensis*, Brazier. Proc. Linn. Soc., N.S.W., page 105.

*Hab.* Yule Island, New Guinea.

### 44.—HELIX (GEOTROCHUS) STRABO.

*Helix Geotrochus Strabo,* Brazier. Proc. Linn. Soc., N.S.W., page 106.

*Hab.* Katow River, New Guinea.

### 45.—HELIX (GEOTROCHUS) SICULUS.

*Helix (Geotrochus) Siculus,* Brazier. Proc. Linn. Soc., N.S.W., page 105.

*Hab.* Katow River, New Guinea.

### 46.—HELIX (GEOTROCHUS) BRAZIERÆ.

*Helix (Geotrochus) Brazieræ,* Brazier. Proc. Linn. Soc., N.S.W., page 107.

*Hab.* Yule Island, New Guinea.

### 47.—HELIX (GEOTROCHUS) ZENO.

*Helix (Geotrochus) Zeno,* Brazier. Proc. Linn. Soc., N.S.W. page 107.

*Hab.* Hall Sound, New Guinea.

### 48.—HELIX (XANTHOMELON) JANNELLEI.

*Helix Jannellei,* Le Guillou. Reeve, Zool., 1842, p. 137.
„ „ Pfr. in Mon. Helic Viv., 1848, vol. 1, p. 322.
„ „ „ „ „ „ 1868, vol. 5, p. 321.
„ „ „ „ „ „ 1875, vol. 7, p. 369.
„ „ (Galaxias) Cox, Monog. Aust. Land Shells, 1868, p. 41, pl. 5, fig 4.

*Helix pachystyloides,* Cox. Proc. Zool. Soc., 1867, p. 725.

*Helix semicastanea,* Cox, Monog. Aust. Land Shells, p. 56.

*Hab.* Cape Grenville, North East Australia ; Cape York, North Australia.

### 49.—BULIMUS MACLEAYI.

*Bulimus Macleayi,* Brazier. Proc. Linn. Soc., N.S.W., page 108.

*Hab.* Yule Island, New Guinea.

### 50.—BULIMUS BEDDOMEI.

*Bulimus Beddomei*, Brazier. M.S.S.

*Hab.* Mount Ernest Island, Torres Straits.

This species comes so near to *Bulimus Macleayi*, Braz., that I will keep the description back for the present, until we get more specimens.

### 51.—BULIMUS (NAPAEUS) PACIFICUS.

*Pupa pacifica*, Pfr. Proc. Zool. Soc., 1846, p. 31.

„ „ „ Mon. Helic. Viv. 1848, vol. 2, p. 309.

„ „ „ „ „ „ 1853, vol. 3, p. 532.

*Bulimus pacificus* „ „ „ 1859, vol. 4, p. 414.

„ „ (NAPÆUS) Cox. Monog. Aust. Land Shells, p. 68, pl. 13, fig. 3.

*Hab.* Barrow, Fitzroy, and Home Islands, North-East Australia; Cape Grenville, North-East Coast; Cape York and Albany Island, North Australia; Sue, Warrior, Bet, Long, Dungeness, and Cocoanut Islands, Torres Straits.

### 52.—BULIMUS (APEAS) TUCKERI.

*Bulimus Tuckeri*, Pfr. Proc. Zool. Soc., 1846, p. 30.

„ „ „ Mon. Helic Viv. 1848, vol. 2, p. 158.

„ „ „ „ „ „ 1868, vol. 6, p. 99.

„ *Walli.* Cox, Catalogue Aust. Land Shells, 1864, p. 24.

„ „ Pfr. in Mon. Helic. Viv. 1868, vol. 6, p. 99.

„ *Tuckeri.* Cox in Monog. Aust. Land Shells, 1869, p. 69, pl. 13, fig. 9.

„ „ Reeve, Conch. Icon. sp. 481.

*Stenogyra Tuckeri* (OPEAS) Albers in Heliceen ed. 2, p. 265.

*Hab.* Barnard, Fitzroy, and Home Islands, North-East Australia; Cape York and Albany Islands, North Australia; Sue, Warrior, Bet, Long, Dungeness, and Cocoanut Islands, Torres Straits.

### 53.—TORNATELLINA MASTERSI.

*Tornatellina Mastersi*, Brazier. Proc. Linn. Soc., N.S.W., page 108.

*Hab.* Darnley Island, Torres Straits.

### 54.—TORNATELLINA GRENVILLEI.

*Tornatellina Grenvillei*, Brazier. Proc. Linn. Soc., N.S.W., page 109.

*Hab.* Home Islands, North East-Australia; Albany Island, North Australia.

### 55.—TORNATELLINA PETTERDI.

*Tornatellina Petterdi*, Brazier. Proc. Linn. Soc., N.S.W., page 109.

*Hab.* Darnley Island, Torres Straits.

### 56.—TORNATELLINA TERRESTRIS.

*Tornatellina terrestris*, Brazier. Proc. Linn. Soc., N.S.W., page 109.

*Hab.* Yule Island, New Guinea.

### 57.—TORNATELLINA EUCHARIS.

*Tornatellina eucharis*, Brazier. Proc. Linn. Soc., N.S.W., page 110.

*Hab.* Barnard Island, No. 3, North-East Australia.

### 58.—PUPA (VERTIGO) MACDONNELLI.

*Pupa* (*Vertigo*) *Macdonnelli*, Brazier. Transactions Royal Soc. N.S.W. 1874, p. 30.

„ „ „ „ Proc. Zool. Soc. 1874, p. 669, pl. 83, figs. 22 and 23.

*Hab.* Barnard Islands No. 3, North-East Australia; Cape York, North Australia.

### 59.—PUPA (VERTIGO) MACLEAYI.

*Pupa* (*Vertigo*) *Macleayi*, Brazier. Proc. Linn. Soc., N.S.W., page 110.

*Hab.* Bet, Sue, Nepean, Dungeness, and Warrior Islands, Torres Straits.

### 60.—PUPA (VERTIGO) *sp.* ?

*Hab.* Cape York, North Australia.

One specimen only of this species was found, with imperfect lip.

### 61.—VITRINA (HELICARION) BRAZIERI.

*Helicarion Brazieri*, Cox. Proc. Zool. Soc., 1873, p. 151.

*Hab.* Fitzroy Island, North-East Australia.

### 62.—VITRINA ——— SP ?

*Hab.* Palm Island, North-East Australia.

### 63.—VITRINA ——— SP ?

*Hab.* Palm Island, North-East Australia.

These two species appear to me to differ very much from the other known Australian species.

### 64.—VITRINA (PELTELLA) ——— SP ?

*Hab.* Barnard Islands, No. 3, North-East Australia; found on trees. This species may be *Vitrina Australis*, Reeve, but I cannot be sure of it, as the whorl on the base next the animal is not preserved.

### 65.—CYCLOPHORUS (DITROPIS) WHITEI.

*Cyclophorus* (*Ditropis*) *Whitei*, Brazier. Transactions Royal Soc. N.S.W., 1874, p. 30.

„ „ „ „ Proc. Zool. Soc. 1874, p. 669, pl. 83, figs. 5—7.

*Hab.* Barnard Islands, No. 3, North-East Australia.

### 66.—CYCLOPHORUS (DITROPIS) BEDDOMEI.

*Cyclophorus* (*Ditropis*) *Beddomei*, Brazier. Proc. Linn. Soc. N.S.W., page 113.

*Hab.* Cape York, North Australia.

### 67.—DERMATOCERA VITREA.

*Leptopoma vitreum*, Lesson. Voy. de la Coq., p. 346, pl. 13, fig. 6.

„ „ Pfr. in Mon. Pneum. Viven, 1852, vol. 1, p. 101.

*Dermatocera vitrea*, H. and A. Adams. Gen. rec. Moll. II., p. 282.

„ „ Pfr. in Mon. Pneum. Viven, vol. 2, p. 77.

„ „ Cox in Monog. Austr. Land Shells, p. 98, pl. 16, fig. 2.

*Hab.* Fitzroy Island, North-East Australia.

### 68.—PUPINELLA CROSSEI.

*Pupinella Crossei,* Brazier. Proc. Linn. Soc. N.S.W., page 111.

*Hab.* Yule Island, New Guinea.

### 69.—PUPINA CROSSEI.

*Pupina Crossei,* Brazier. Proc. Linn. Soc., N.S.W., page 110.
*Hab.* Palm Island, North-East Australia.

### 70.—PUPINA BILINGUIS.

*Pupina bilinguis,* Pfr. Proc. Zool. Soc., 1850, page 97.
„ „ „ Mon. Pneum. Viven, 1851, vol. 1, p. 142.
„ „ „ „ „ 1865, Supp, p. 94.
„ „ „ Sowb. Thes. Conch., vol. 3, pl. 265, figs. 8, 9, 10.
„ „ „ Cox. Monog. Austr. Land Shells, p. 100, pl. 16, fig. 6*a*, 6*b*.
*Hab.* Cape York and Albany Island, North Australia.

### 71.—PUPINA THOMPSONI.

*Pupina Thompsoni,* Forbes, Voyage H.M.S. Rattlesnake; App. p. 381, pl. 3, fig. 2.
„ „ Pfr. in Mon. Pneum. Viven, 1851, vol. 1, p. 142.
„ „ „ „ „ 1865, Supp. p. 96.
„ „ Sowb. Thes. Conch. vol. 3, pl. 265, fig. 18.
„ „ Cox, Monog. Austr. Land Shells, p. 102, pl. 16, figs. 12, 12*a*, 12*b*
*Hab.* Fitzroy Island, North-East Australia.

### 72.—DIPLOMMATINA GOWLLANDI.

*Diplommatina Gowllandi,* Brazier. Transactions Royal Soc., N.S.W., 1874, p. 31.
„ „ „ Proc. Zool. Soc., 1874, p. 670, pl. 83, figs. 19—21.
*Hab.* Fitzroy Island, North-East Australia.

### 73.—HELICINA COXENI.

*Helicina Coxeni*, Brazier. Proc. Linn. Soc., N.S.W., page 111.
*Hab.* Yule Island, New Guinea.

### 74.—HELICINA MACLEAYI.

*Helicina Macleayi*, Brazier. Proc. Linn. Soc., N.S.W., page 112.
*Hab.* Barnard Islands, No. 3, North-East Australia.

### 75.—HELICINA MAINO.

*Helicina Maino*, Brazier. Proc. Linn. Soc., N.S.W., page 112.
*Hab.* Katow, New Guinea.

### 76.—HELICINA YORKENSIS.

*Helicina Yorkensis*, Pfr. Proc. Zool. Soc. 1862, p. 277.
„ „ „ Mon. Pneum. Viven, 1865, sup. 2, p. 228.
„ „ Sowb. Thes. Conch., vol. 3, p. 290, pl. 275, figs. 342-343.
„ „ Cox, Monog. Austr. Land Shells, p. 108, pl. 17, fig. 16.
*Hab.* Barrow Island, North-East Australia.

### 77.—HELICINA FUMIGATA.

*Helicina Gouldiana*, Forbes. Voyage H.M.S. Rattlesnake, App. p. 382, pl. 3, fig. 3 (non-Pfr.)
„ „ Pfr. in Mon. Pneum. Viven., 1852, p. 236.
„ „ „ „ „ „ Supp. 1858, p. 207.
„ „ „ „ „ „ Supp. 1865, p. 236.
„ „ Cox in Monog. Austr. Land Shells, p. 108, pl. 17, fig. 15.
„ *fumigata* Sowerby, Thes. Conch. vol. 3, p. 290, pl. 275, fig. 345.
*Hab.* Home Islands, North-East Australia.

### 78.—HELICINA RETICULATA.

*Helicina reticulata*, Pfr. Proc. Zool. Soc., 1862, p. 277.
„ „ „ Mon. Pneum. Viv. Supp. 1865, p. 235.
„ „ Sowb. Thes. Conch., vol 3, p. 287, pl. 272, figs. 231-232.
„ „ Cox in Monog. Austr. Land Shells, p. 106, pl. 17, fig. 14.

*Hab.* Cape York and Albany Island, North-East Australia.

### 79.—HELICINA ——— SP? .

*Hab.* Palm Island, North-East Australia; two specimens found.

### 80.—HELICINA ——— SP?

*Hab.* Brook Island, North-East Australia ; one dead specimen found.

### 81.—TRUNCATELLA YORKENSIS.

*Truncatella Yorkensis*, Cox Monog. Austr. Land Shells, p. 93., pl. 15, fig. 11-11*a*.

*Hab.* Cape York, North Australia; Warrior Island, Torres Straits.

### 82.—TRUNCATELLA FERRUGINEA.

*Truncatella ferruginea*, Cox Monog. Austr. Land Shells, p. 94.

*Hab.* Cape Grenville, North-East Australia; Cape York, North Australia.

### 83.—TRUNCATELLA TERES.

*Truncatella teres*, Pfr. Proc. Zool. Soc. 1856, p. 336.
„ „ „ Monog. Auricul. Viv. 1856, p. 188.
„ „ „ „ Pneum. Viv. Supp. 1858, p. 7.
„ „ „ „ „ „ „ 1865, p. 7.
„ „ Cox, Monog. Austr. Land Shells, p. 92, pl. 15, fig. 9.

*Hab.* Barrow Island and Cape Grenville, North Australia.

84.—TRUNCATELLA ——— SP ?

*Hab.* Warrior Island, Torres Straits.

85.—TRUNCATELLA ——— SP ?

*Hab.* Barrow Island, North-East Coast of Australia.

86.—TRUNCATELLA ——— SP ?

*Hab.* Katow, New Guinea.

## MONDAY, APRIL 24TH, 1876.

WILLIAM MACLEAY, ESQ., President, in the Chair.

### NEW MEMBER PROPOSED.

Mr. William Macdonnell.

The following papers were read :—

Description of a supposed new species of Fruit Pigeon, from Malacola, one of the New Hebrides Islands, S. S.; proposed to be called *Ptilinopus Corriei*—by E. PIERSON RAMSAY, F.L.S., Curator of the Australian Museum, Sydney.

### PTILINOPUS CORRIEI, *sp. nov.*

*Male.*—The whole of head, chin, and throat, olive green,* becoming bright green on the neck and occiput; the whole of the remainder of the upper and under surface bright deep green; the wing quills deep golden green, mesially, shaded with black; the inner webs of the primaries black towards the middle and basal portion of the feather. The three inner secondaries and their corresponding coverts of the larger series only having an oblique oblong blotch of bright golden yellow at their tip, which on the secondaries is confined to the outer web only the smaller wing-coverts at the bend of the wing adjacent to the scapulars having a roundish, crescentic, or cordate spot of white (?) * near the tips of the feather—some show a green shaft line and a margin of green round the tip of the feather; under wing-coverts, green; the outer series, ashy ; under surface of the wings, ashy brown ; under surface of the tail, ashy brown, becoming lighter towards the base, and crossed conspicuously near the tip with a band of light ashy grey, upper surface, green, the grey band not so conspicuous; the inner portion of the legs, and lower part of the abdomen, yellowish (much faded); under tail-coverts, yellow, blotched with oblong marks of green on inner webs ; the thighs, outer feathered portion of the legs, and the flanks bright green, like the rest of the body ; tail of 14 feathers—square, even ; of the wings the third, fourth, and fifth feathers are nearly equal and longest ; bill, legs, and feet, bluish lead colour ; tarsi not feathered to the toes, lower portion scaled in front ; total length 9·5 inches ; wing 6·3 ; tail 3·4 ; bill from forehead, 0·8 ; from gape 1 inch ; tarsi 9·5.

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* These parts may have originally been bright green, like the rest of the body.

This description has been taken from a mounted spirit-specimen, the sides of the neck and interscapular region somewhat discoloured. The head is at present of a uniform olive green, and may be discoloured, but, from the uniformity of the tint and its blending with the green on the occiput and neck, I am inclined to believe that olive green, or perhaps, greyish olive green, was its original colour. The broad bright deep yellow blotches on the tips of some of the inner secondaries and the corresponding similar markings on three of the larger series of the wing-coverts just above them, show very conspicuously on the bright deep golden-green of the quills.

In form, this species is much like that of a *Treron* ; it is a robust, compact, and strong made bird ; the texture of the feathers, resembling that of *Chrysœna viridis* (E.S.L.) ; the feet approach, especially in the strong and long hind toe, those of a *Carpophaga.*

The only specimen we possess was obtained by Dr. A. Corrie, during the cruise of H. M. S. "Pearl," about August, 1875, at the Island of Malacola, one of the New Hebrides group, and presented to the Museum in October last. I have named this fine species in honour of its discoverer, a gentleman much devoted to the cause of science.

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* These spots are much discoloured, and may have been light yellow.

## Description of a new species of Plover, from North Australia—by E. PIERSON RAMSAY, F.L.S., Curator of the Australian Museum, Sydney.

### ÆGIALITIS MASTERSI, *sp. nov.*

*Adult Male.*—All the upper surface of the wings, back, and rump, brown; the margins of the feathers, paler; the primaries and primary coverts, blackish brown, almost black on the outer webs and tips of the primary quills, the whole of the shaft of the first primary, except at the tip, and of the remainder the central portion of the apical third of the shafts, white; secondaries dark brown, narrowly margined with white at the tips and along the outer web for a short distance, and a narrow line of white along the shaft on the outer web; the inner five of the primaries having an irregular elongated patch of white on the outer web, about the central portion of the feathers; the outer series of all the wing-coverts margined with white at the tips; the side feathers on the rump white, or broadly tipped with white; the upper tail-coverts brown, more or less tipped and widely margined with white to a greater extent on the outer series; axillaries and under surface of the wing white; the marginal feathers of the shoulders below, in some, brown, margined with white; the outer series of the under wing-coverts, ashy grey, margined and tipped with white; some of the side feathers adjacent to the flanks brown, margined with white, or, in some white mesially shaded with brown; centre of the lower portion of the breast, abdomen, flanks, thighs, and under tail-coverts white; throat and sides of the neck, from below the ear-coverts to the chest, snow-white, bounded by a narrow line of black feathers; lores, forehead, sides of the face, and ear-coverts black, a roundish white spot on either side on the forehead, just over the lores; a small linear mark of white, under the lower eyelid; eyelids black; the remainder of the head chestnut, mixed with brown on the crown; sides of the occiput, nape, and the whole of the hind neck and upper part of the interscapular region extending across the chest and breast, deep chestnut; sides of the chest extending nearly to the flanks, lighter chestnut;

feathers on the central portion of the breast below, narrowly margined with dull white; tail brown, the two outer feathers, broadly margined with white, or altogether white, mesially shaded with brown towards the tip; total length from tip of bill, 7·6 inches; bill from forehead, 0·7; from gape 0·8; from the anterior or margin of nostril 0·43; wing 5·15; tail 2·2; tarsus 1·15.

*Hab.*—North-East of Australia, from Rockingham Bay to Cape York.

*Remarks.*—This fine species, which I have named after Mr. George Masters, to whose exertions the fine collection of Australian birds and mammals in our Museum is mainly due, is most nearly allied to *Hiaticula inornata* of Gould.

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## Description of a New Pupina collected during the Chevert Expedition, by John Brazier, C.M.Z.S.

### Pupina nitida.

Shell ovate, thin, polished, shining, transparent, smooth, pale reddish horny, spire ovately conical, apex somewhat acute, whorls 5½, moderately convex, penultimate whorl largely inflated, last as seen in front equal with the one above, suture slightly impressed, having a reddish line running spirally to the apex; aperture vertical, circular, continuous on the body whorl, peristome and auricles white or pale brown, thickened, upper channel rather narrow, cut well down in the aperture, and on the outer side vertical to the suture, and covered by a triangular plate, lower channel obliquely cutting the columellar deep down on the inside of the aperture, and covered by small thickened plate.

Length 4¼, breadth 2½ lines at penultimate whorl, and 1¾ line at third whorl from aperture. Aperture 1¼ line broad.

*Hab.* Barrow Island, North-East Australia.

This species is closely allied to *Pupina ventrosa*, Dohrn ; it is, however, larger and more inflated, the peristome is continuous forming a raised ridge on the body whorl, and the auricles are more thickened.

### MONDAY, 29TH MAY, 1876.

WILLIAM MACLEAY, ESQ., PRESIDENT, in the Chair.

The following Donations were announced .—

Proceedings of the Royal Society of New South Wales for 1874, by the Society; Part I. of Catalogue of Birds Australian Museum, by the Curator; Vols. 1, 2, 3, and 4 of the Proceedings of the Zoological and Acclimatisation Society of Victoria, by the Society; six published papers on the "Structure of Teeth," thirteen on the "Microscopical Structure of Fossil Teeth," and a list of Palæozoic Fishes, by the author, W. J. Barkas, M.R.C.S.E.

NEW MEMBER PROPOSED.

Mr. W. J. Barkas, Surgeon, Bombala.

MEMBER ELECTED.

Mr. William Macdonnell.

The following papers were read :—

## THE ARANEIDES OF THE "CHEVERT" EXPEDITION,

BY H. H. B. BRADLEY, ESQ.

(*See plates.*)

### PART I.

CLASS CONDYLOPODA, *Labrellie.*
SUB-CLASS ARACHNIDA.
ORDER ARANEIDEA.

I. ORBITELARIÆ.

1. EPEIRIDES.

A. EPEIRINES.

### GASTERACANTHA, *Sund.*

*G. variegata, Walch.*

Plectana variegata Walck His. Nat. des Ins. Apt. vol. 2, p. 160.

G. variegata L. Koch Arach. Aust., p. 2, pl. 1, fig. 1.

Five females from Palm Island, Cleveland Bay; one female from Katow, New Guinea; the specimens described by Walcknaer are from Port Dorey, New Guinea.

*G. minax, Thor.*

G. minax. Thor. nya exostisca Epeirider in oefvers of kongl. bet akad Forhandl xv., 1857, p. 301.

G. minax. Thor. kongl. Suenska Fregatten Eugenies Resa Zool. Arach. 1, p. 21, 1865.

G. minax L. Koch Arach. Aust., p. 10.

G. flavomaculata Keyserling Beitr. zur kenntn. den orbitelæ in dem verhandl der k. k. Zool. Bot. Geselschaft in Wien xv., p. 801, t. xix., f. 819.

Two females from Percy Island. The specimens described by Dr. Koch are from Sydney, where this species is tolerably common.

*G. suminata, L. Koch.*

G. suminata L. Koch Arach. Aust., p. 11, p. 1, f. 7.

Two females much damaged, from Hall Sound. The specimens described by L. Koch are from Viti Levu.

*G. sacerdotalis, L. Koch.*

G. sacerdotalis, L. Koch Arach. Aust. 198, f. 1.

Six females (one immature) from Percy Island; one female from Cape York. The specimens described by Dr. Koch are from Bowen.

*G. crucigera, N.S.*

Cephalothorax as long as broad, glabrous, blueish-black above mandibles, same colour; fangs, reddish-brown; maxellæ and labium, reddish-brown, lighter towards the tips; sternum, reddish-brown, with a single white (yellowish) spot corresponding to each leg, also a similar spot at the posterior part; legs, yellowish-brown, gradually darker towards the claws.

Abdomen glabrous, twice as broad as long, triangular, the apex being in front furnished with six spikes, of which two—very strong—form the angles at the base of the triangle; these are orange colour tipped with black: two other spikes—black—are placed nearly one-third of the distance from the former to the apex of the triangle; the remaining two, also black, are placed in the base of the triangle, and are each about twice as far from the first-mentioned pair as they are from one another. The remaining upper surface of the abdomen is greyish yellow with two broad reddish-black stripes extending along the sides from near the apex of the triangle to the base of the first-mentioned spikes; there are four small round punctured spots on each of these stripes, the centre of each spot being raised; below these stripes are corresponding yellow stripes. There are two short dark stripes in prolongation of the large spikes, on each of which are two punctured spots similar to those above-mentioned; down the centre there is a fine dark line with a cross line about one-third of its length from the anterior part forming a cross; between the anterior parts of the latitudinal stripes are two spots similar to those described above, at the ends of the arms of the cross are two more, and between these and the cross stripes are two more; below these stripes are four very minute spots placed transversely, the underside is reddish-brown covered with small yellow spots. Length and breadth of cephalothorax, 1 line; length of abdomen, 2½ lines; breadth, exclusive of spikes, 5 lines; these (the lateral posterior spikes) are 1 line in length, the front pair about half that length.

This species is from Hall Sound, New Guinea, where it seems very numerous, there being 31 specimens (females, three immature). There is but little variation, except that the black stripe along the sides of the abdomen varies in width.

## THOLIA, *L. Koch.*

This very interesting genus was founded by Dr. L. Koch on specimens in the Museum Goddeffroy, and the Museum in Vienna, and placed by him among the Orbitelariæ. I have myself caught specimens of two different new species of this genus, and in neither case did I find any web. My own experience is that neither Tholia, Cystarachne, nor Celœnia (Thlaosoma) build any web; the two latter genera I had opportunities of watching during weeks, when I have almost day after day found them occupying a position on the lower side of a leaf (magnolia or loquat) where, if they had any web, I must have seen it. These genera may all be obtained by beating branches of trees over an umbrella or cloth. I have found Tholia in Sydney and at Mount Victoria, 3000 feet above the sea.

### THOLIA *Macleayi*, *N.S.*

Cephalothorax, dark reddish-brown above a deep furrow separating the caput; abdomen projecting over the cephalothorax as far as the second pair of legs where there is a slight transverse band of greyish hairs; mandibles, reddish-brown, fangs being slightly darker; maxillæ yellowish red tipped with fawn; labium red: sternum, reddish-brown; palpi same colour moderately furnished with short hairs.

Legs, 1st, 2nd, and 4th pairs have the coxal and exinquinal red; femoral red, tipped with dark reddish-brown, genural dark reddish-brown; tibial, light reddish-brown with dark transverse bands in the centre and at the tip; metatarsi light reddish-brown; tarsi darker; the 3rd pair is the same colour without the dark bandings.

Abdomen of a generally triangular form, the base being in front, tuberculated or furrowed above, and of a reddish brown colour, the prominent marking being two dark spots, each about equidistant from the side to the centre of the abdomen; between these is a lighter coloured space, having in its centre a longitudinal line of four small tubercles, on either side of which (at the front of the abdomen) is a round depression with a minute tubercle in its centre; next come two eliptical depressions; then at the side are three round depressions; placed between these and the dark spots before mentioned are two small round depressions; about midway from the lower of the three lateral depressions to the point of the triangle is a moderate-sized tubercle; at the termination of the central line of tubercles, are five transverse furrows of a darker colour, having ridges more or less tuberculated between them

Below, the part immediately around the vulva is of a yellowish red, vulva being dark reddish brown; spiracular plates are also marked by two curved dark lines; below these the colour is dark brown, almost black; the sides curve over a little, and under this curve is a line more or less broken into spots of silvery white.

Length of cephalothorax, 2 lines; breadth, 1½ lines; length of abdomen, 3 lines—but it projecting one line over the cephalothorax, leaves total length 4 lines; breadth of abdomen, 4 lines.

This species is from Palm Island, Cleveland Bay, there being but one specimen—a female.

### ARGIOPE, *Sav. and Aud.*

*A. regalis, L. Koch.*

A. regalis, L. Koch, Arach. Aust., p. 36, pl. iii., fig. 4.

Two females, one immature (?) from Cape York; one female, from Katow, New Guinea; one female from Percy Island; one female (immature) from Barnard Island, varies in having the bandings of the legs very distinct, the light marking being a light yellow, the dark bands being a dark reddish brown; in an immature female from Cocoanut Island, the leg marks are very indistinct, and the first band on the abdomen is broken into three distinct spots; the second band is very indistinct, with four spots of a lighter colour.

The type specimens are from Port Mackay.

*A. picta, L. Koch.*

A. picta, L. Koch, Arach. Aust., p. 36, pl. iii., fig. 3.

One female from Hall Sound, New Guinea; one female from Katow. Dr. Koch describes specimens from Port Mackay.

*A variabilis, N.S.*

This insect, in its shape and colour closely resembles A. regalis. The cephalothorax, however, is longer than broad—3½ lines long, 3 broad; the different parts of the mouth and the sternum are, in shape and colour, as in *A. regalis.*

Legs reddish, with dark brown bands embracing the coxal, exinquinal, the lower and upper parts of the femoral, the whole of the genual, the lower and upper parts of the tibial and of the metatarsus, and the whole of the tarsus; the legs are tolerably well furnished with hairs and spines throughout.

Abdomen 5 lines long, 4 broad; above of a dark reddish brown, with three broad bands of yellowish white; the first, from the front, leaves a narrow space of dark reddish brown in front; between the three bands are two spaces, each as broad as the light bands, the last band being at the broadest part of the abdomen, and terminating between two lateral tubercles of moderate size; below this band the dark colour is broken by two almost imperceptible bands of a lighter shade of brown, immediately above each of which are five minute equidistant white spots, extending across the abdomen; immediately below each of the two upper, and upon the lower bands, are two pits, the centre pair being much largest and deepest; on the under side are two yellowish white bands, extending from the epigyne beyond the spinnerets; these are slightly broadest at the upper part, and narrowest about the centre, where they are crossed by a long white spot; epigyne nearly black, the part above it being yellowish white; below the epigyne, and within the lines, the colour is dark brown, yellowish in the centre, where are six long-shaped transverse white spots, arranged in pairs; immediately above the spinnerets is a longitudinal strip of yellow.

Spinnerets yellowish brown; outside the lines the colour is dark brown, marked with white or yellowish spots.

This species comes very close to *A. regalis*, but the lateral tubercles, and the markings on the underside of the abdomen, lead me to consider it a separate species, and not a variety. Two specimens—from Darnley Island and Sue Island, Torres Straits; a specimen from Cocoanut Island shows the second transverse band on the upper side of the abdomen broken into four distinct spots; the third band is darker in parts, seeming at first sight, also, almost like four spots; the underside is the same, but the longitudinal lines are slightly broader. A specimen from Darnley

Island, I believe, also belongs to this species; the ground colour of the abdomen is much lighter, and the second and third lines, broken into spots, are rather indistinct; other specimens, from Warrior and Sue Island, gradually merge the three transverse bands, until in some specimens (from Cocoanut, Darnley, and Sue Islands, and from Hall Sound) the three bands become one white patch, covering the whole of the upper side of the abdomen as far as the second pair of lateral tubercles; the markings on the underside vary but slightly, and only in respect of the lines and spots being more or less distinct, the general form being traceable in all. I have felt great difficulty in dealing with this species, but the specimens run so much one into the other as to convince me of their being but varieties. All the specimens are females.

*A lunata N.S.*

Cephalothorax about as long as broad, and otherwise closely resembling *A. regalis*. The parts of the mouth are also similar, but the palpi are light yellowish colour, with darker bands at the upper part of cubital and radial; the sternum is bright golden yellow. Below the sternum is a small spot of the same colour.

Legs of a reddish-brown colour, the first and second pairs with bands of silvery hairs, two on the femoral, and one on the tibial; in the third and fourth pairs these only appear in the tibial.

Abdomen above of an uniform dark-brown, with one transverse half-moon shaped white band at the front part, the points being towards the front; on the underside, dark reddish-brown, with two white bands broken into spots, extending from the epigyne, past the spinnerets, which are a lighter colour; in the centre of the space are three oblong white spots, placed longitudinally, and six oblong white spots, placed transversely in pairs, between the outer and centre lines; towards the sides the colour gradually changes to a light greyish brown, with minute spots of a darker colour.

Two specimens, from Sue and Cocoanut Islands, Torres Straits, show but little variation—that from Sue Island being slightly darker.

*A. protensa, L. Koch.*

A protensa Koch Arach. Aust., p. 211, pl. xviii., fig. 8.

One female, from Cape Grenville, much damaged, seems to belong to this species; the type specimen is from Bowen.

### EPEIRA, *Walck.*

#### 1ST GROUP.

*E. trigona, L. Koch.*

E. trigona Koch Arach. Aust., p. 50, pl. iv. fig. 1.

One female from Hall Sound, New Guinea. The specimens described by L. Koch are from Port Mackay, Queensland.

*E. biapicata, L. Koch.*

E. biapicata L. Koch, Arach. Aust., p. 54, pl. iv. fig. 4.

Two females, from Katow, and four females from Darnley Island. The specimens described by L. Koch are mentioned merely as from New Holland.

*E. producta, L. Koch.*

E. producta, L. Koch, Arach. Aust., p. 55, pl. iv., figs. 5, 6, and 7.

Two very young female specimens from Hall Sound, and a specimen from Percy Island (female), immature, and so damaged as to be almost undistinguishable; seem to belong to this very variable species. The specimens described by Dr. Koch are from Brisbane, Rockhampton, Sydney, and New Holland; the latter would, perhaps, be the best habitat to give, as this species is, to my knowledge, found from Sydney to Cape York.

#### 4TH GROUP.

*E. mangareva, L. Koch.*

E. mangareva, L. Koch, Arach. Aust. p. 85, pl. vii., fig. 4 and 5.

Five females, one immature, from Hall Sound; six females, from Percy Island; one male from Hall Sound; a male, immature, and a female, from Katow. The specimens described by Dr. Koch are from Port Mackay, Bowen, Tonga, Fiji, Upolu, Rorotonga, and New Holland.

*E. maritima, Keys.*

E. maritima, E. Keyserling, Bertrage zur kenntn. der Orbitelæ in dem Verhanl, der k-k, zool-bot. Geselschaft zu Wien Jahrg, 1865, p. 813, T. xviii., figs. 22 and 23.

E. maritima, L. Koch, Arach. Aust., p. 91.

E. cylindroides (?) Walck Hist. Nat. des Ins. Apt., vol. II. p. 136.

Three females from Hall Sound; two females from Cocoanut Island; two females from Warrior Island; and one female, each, from Katow, Sue Island, and Bet Island. L. Koch refers to specimens from Pelew, Fiji, and Bowen. The colour varies a little in shade in the different specimens, and the bandings on the legs are very distinct in some young specimens. There is also a young specimen (female) from Sue Island, which approaches closely to this species; the pattern on the upper and lower sides of the abdomen is different: the legs are much slighter, and, altogether, the insect seems to belong to a different species, but it is much too immature to be described with safety.

*E. Macleayi, N. S.*

Cephalothorax much longer than broad, the caput being high; the four centre eyes are very close together; the laterals at the sides of the caput are also close to one another; colour of cephalothorax dull yellowish red, the caput being a light reddish yellow; legs palpi sternum and mandibles same colour, fangs red.

Legs moderately long—first pair, 3 lines long; abdomen oval, fawn colour, covered closely with minute silvery hairs, with 8 pits, in 2 longitudinal lines; between these lines is a longitudinal line of faint white; the abdomen slightly overlaps the cephalothorax.

Length of cephalothorax, 1½ lines; of abdomen, 2 lines: total length, 3 lines; one female, from Hall Sound. There is, also, apparently, another specimen, from Percy Island, but so damaged as to be indistinguishable.

### 5TH GROUP.

*E. Mastersii, N. S.*

Cephalothorax longer than broad; the general form of cephalothorax, mandibles, maxillæ, and sternum, closely resemble *E. Graeffii*, to which this species is closely allied; colour, light reddish yellow, with a dark band on each side of the caput; mandibles, reddish; fangs, reddish-brown; legs moderately long, same colour as cephalothorax, maxillæ same colour.

Abdomen, slightly overlapping the cephalothorax, oval, slightly wider at the posterior part; above of a light yellowish grey, with two longitudinal lines of brown spots of a half-moon shape, posterior brown; the underside is of the same yellowish grey colour; the part between the epigne and the spinnerets being a brown shield-shaped spot; on each side are three long brown accentuate spots.

Length of cephalothorax, 1½ to 2 lines; of abdomen, 2 to 2½ lines; total, 3 to 4 lines.

A female from Percy Island; five females and two males (one immature) from Cocoanut Island; two females and a male from Sue Island; two females from Cape Grenville.

The male is coloured and marked as the female; the only difference is, that it is smaller and proportionately slighter. The specimens vary but very little

### 6TH GROUP.

*E. pthisica, L. Koch.*(?)

E pthisica, L. Koch, Arach. Aust., p. 103, pl. viii., fig. 5.

An immature female from Hall Sound seems to belong to this species, which was first described by Dr. Koch from specimens from Port Mackay, Queensland.

### 10TH GROUP.

*E. strangulata, L. Koch.*

E. strangulata, L. Koch, Arach. Aust., p. 118, pl. ix., fig. 6.

Ten females from Hall Sound, and one from Darnley Island, varying very much in colour and pattern of marking. I have with great hesitation referred to this species, though it is possible that examination of a larger number of specimens may show two species, particularly with regard to a damaged specimen from Hall Sound, the cephalothorax of which is light yellow, marked with a brown longitudinal central band, and two brown lines marking the caput. But, with only one damaged specimen of this type, I have not felt justified in forming a new species. The general form of the cephalothorax and parts, and the marking of the legs, being the same as the other specimens. The type specimens are from Viti Levu and Upolu.

### 11TH GROUP.

*E. caudata, N.S.*

Cephalothorax cordate, as long as broad; caput high, narrow, and tolerably distinct, covered with short hairs; color of cephalothorax grey; legs and palpi moderately short, yellowish grey, banded with brown; mandibles reddish brown; maxillæ yellowish grey; sternum oval, reddish brown.

Abdomen rounded in front and gradually broader, nearly as far as the spinnerets (half its length), after which it suddenly contracts into a tail; colour above greyish; the underside, as far as the spinnerets, is a dark brown, with a white spot above and another below the epigyne, and two white spots or lines enclosing a cordate; spot of brown extending nearly from the epigne to the spinnerets these last white spots are narrowest in the centre; the remainder of the underside grey.

Length of cephalothorax, 1½ lines; of abdomen, 4 lines.

One female from Hall Sound. This is quite a new form of the tailed Epeiras, and should perhaps form the type of a new group, the cephalothorax and caput being very different from those of the other species forming this group.

### EBAEA (*L. Koch.*)

*E. prœcincta L. Koch.*

E. prœcincta L. Koch., Arach. Aust., p. 130, pl. x., fig. 2.

One female (? mature) from Palm Island. The species described by Dr. Koch are from Samoa.

### META (*C. Koch.*)

*M. granulata Walck.*

Tetragnatha granulata Walck Hist. Nat. des Ins. apt iii., p. 222. Tetragnatha granulata, L. Koch Beschrieb neuer arach. und myr. in den verhandl. der k. k. zool bot Geselschaft zu Wien Jahrq, 1867, p. 185. Meta granulata Koch, arach. aust., p. 136, pl. 10, fig. 5.

One female from Percy Island; three females from Hall Sound. These specimens show a gradual disappearance of the dark markings on the upper side of the abdomen. One female from Bet Island seems to belong to this species, but it is too crushed for certain recognition.

*M. decorata. Blackw.*

Tetragnatha decorata Blackw. ann and mag. Nat. Hist., July, 1864.

Tetragnatha decorata Camb. Linnean Soc.'s Journal Zool., vol. x., p. 389, pl. xiii., figs. 61 to 68.

Meta decorata L. Koch, Arach. Aust., p. 141, pl. xi., fig. 5.

Two females from Hall Sound. The specimens previously described are from Bombay, Ceylon, Bowen, and Port Mackay.

*M. striatipes, N.S.*

Cephalothorax longer than broad, yellowish grey above; caput marked by a furrow; about the same height as cephalothorax; mandibles, maxillæ, and labium brownish red; sternum yellowish grey; legs yellowish grey, with a black band at the genual and lower end of the tibial, brownish grey towards the tarsi; the third pair want the dark bands.

Abdomen long, narrow, high in front, where it is widest, and extending but a short distance beyond the spinnarets; silvery grey above, with a light brownish-grey longitudinal mark extending half way down the centre; sides same colour, with two longitudinal marks of silver grey; under side light grey.

Length of abdomen, 4 lines; of cephalothorax, 1 line.

### NEPHILA, *Lench.*

*N. venosa, L. Koch.*

N. venosa L. Koch Beschrieb, Neur Arach. and Myr. in den verhandl der k. k. Zool. Bot., Geselschaft zu Wien, 1867, p. 183.

N. venosa, L. Koch. Arach. Aust., p. 148, pl. xii., fig. 1.

Females from Cape York, Hall Sound, Cocoanut Island, New Guinea; the type species are from Rockhampton, Brisbane, Port Mackay, and Ovalau.

*N. nigritarsis, L. Koch.*

N. nigritarsis L. Koch, Arach. Aust., p. 152, pl. xii., fig. 4

Females from Warrior Island, Hall Sound, New Guinea, Long Island, Cape Grenville; the type specimens are from Rockhampton and Port Mackay.

*N. fuscipes, C. Koch.*

N. fuscipes, C. Koch, die Arach. Bd. vi., p. 136, T. ccxii., fig. 528.

Epeira fuscipes, Walck, Hist. Nat. des his., Apts., T. ii., p. 97, N. 89.

Nephila fuscipes, L. Koch, Arach. Aust., p. 156, pl. xiii., fig. 1.

Females from Darnley Island, Cape Grenville, Cape York, and Hall Sound. Dr. Koch mentions this species as found at Pelew Island, Port Mackay, Rockhampton, Bowen, and Port Denison.

*N. imperatrix, L. Koch.*

N. imperatrix, L. Koch, Arach. Aust., p. 159, pl. xiii., fig. 3.

Females from Cape York and Percy Island; the type specimens are from Port Mackay, Rockhampton, and Bowen. I have myself found this species near Sydney.

*N. procera, L. Koch.*

N. procera, L. Koch, Arach. Aust., p. 162, p. xiv., fig. 1.

Females from Palm Island, Katow, and Hall Sound, the latter are the largest insect, but I cannot distinguish them from this species; the type specimens are from Port Mackay and Bowen.

### TETRAGNATHA, *Latr.*

*T. ferox, L. Koch.*

T. ferox, L. Koch, Arach. Aust., p. 173, pl. xiv., f. 415.

Two females from Katow; the types are from Bowen, Port Denison, Port Mackay, and Rockhampton.

*T. cylindrica, Walck.* (?)

T. cylindrica, Walck. His. Nat. des Ins Apt., T. ii., p. 210.

T. cylindrica, E. Keyserling Beitrage zur Kenntniss der Orbitilæ in dem verhandl der k. k. Zool. bot., Geselsch zu Wien, Jahrg., 1865, p. 842, T. xx., f. 18 and 19.

T. cylindrica, L. Koch, Arach. Aust., p. 18, p. xv., fig. 3.

One female from Hall Sound. Dr. Koch describes specimens as from Sydney.

*T. bituberculata, L. Koch.*

T. bituberculata, L. Koch, Beschrieb, nuer Arach. und Myr in den verhandl der k. k., Zool. bot., Geselsch zu Wien, Jahgr., 1867, p. 184.

T. bituberculata, L. Koch, Arach. Aust., p. 183, pl. xv., fig. 5.

Two females (one immature) from Katow; the specimens described by L. Koch are from Rockhampton, Bowen, Brisbane, Port Denison, and Port Mackay.

## A LIST of the Pleurotomidæ collected during the Chevert Expedition, with the description of the new species—by JOHN BRAZIER, C.M.Z.S.L.

### FAMILY PLEUROTOMIDÆ.

### SUB-FAMILY PLEUROTOMINÆ.

### 1.—PLEUROTOMA VIOLACEA.

*Pleurotoma violacea*, Hinds. Proc. Zool. Soc., 1843, p. 38.
„ „ Reeve. Conch. Icon., pl. 22, sp. 186.

*Hab.* Cape Grenville, North East Coast of Australia, 20 fathoms; Princess Charlotte Bay, North East Australia, 14 fathoms; Cape York, North East Coast, 11 fathoms; Darnley Island, Torres Straits, 20 fathoms; Katow, New Guinea, 4 fathoms. Also found as far south as Jervis Bay and Port Jackson, in New South Wales (Brazier).

### 2.—PLEUROTOMA ARMILLATA.

*Pleurotoma armillata*, Reeve. Proc. Zool Soc., 1845, p. 111.
„ „ „ Conch. Icon., pl. 21, sp. 176.

*Hab.* Darnley Island, Torres Straits, 20 fathoms; sandy mud bottom.

### 3.—PLEUROTOMA PUNCTATA.

*Pleurotoma punctata*, Reeve. Proc. Zool. Soc., 1845, p. 111
„ „ „ Conch. Icon., pl. 21, sp. 181.

*Hab.* Darnley Island, Torres Straits, 20 to 30 fathoms.

### 4.—PLEUROTOMA (SURCULA) GEMMATA.

*Pleurotoma gemmata*, Hinds. Proc. Zool. Soc., 1843, p. 37.
„ „ Reeve. Conch. Icon., pl. 40, sp. 83.

*Hab.* Darnley Island, Torres Straits, 11 fathoms; bottom mud.

### 5.—PLEUROTOMA (SURCULA) REFLEXA.

*Pleurotoma reflexa*, Reeve. Proc. Zool. Soc., 1845, p. 114.
„ „ „ Conch. Icon., pl. 28, sp. 252.

*Hab.* Katow, New Guinea, 4 to 7 fathoms; sandy mud bottom.

### 6.—PLEUROTOMA (SURCULA) JUBATA.

*Pleuortoma jubata*, Hinds. Proc. Zool. Soc., 1843, p. 37.
„ „ Reeve. Conch. Icon., pl. 7, sp. 52.

*Hab.* Darnley Islands, Torres Straits, 20 to 30 fathoms.

### 7.—PLEUROTOMA (SURCULA) BREVICAUDATA.

*Pleurotoma brevicaudata*, Reeve. Proc. Zool. Soc., 1843, p. 186.
„ „ „ Conch. Icon., pl. 15, sp. 126.

*Hab.* Darnley Island, Torres Straits, 12 fathoms.

### 8.—DRILLIA SINENSIS.

*Clavatula Sinensis*, Hinds. Proc. Zool. Soc., 1843, p. 38.
*Pleurotoma Sinensis*, Reeve. Conch. Icon., pl. 11, sp. 153.

*Hab.* Cape Grenville, North East Australia, 13 fathoms; coarse sandy bottom.

### 9.—DRILLIA TAYLORIANA.

*Pleurotoma Tayloriana*, Reeve. Conch. Icon., pl. 40, sp. 366.

*Hab.* Darnley Island, Torres Straits, 30 fathoms; coarse white sand.

Two specimens of this rare species were brought up from the above depth.

### 10.—DRILLIA PUTILLA.

*Pleurotoma putillus*, Reeve. Proc. Zool. Soc., 1845, p. 113.
„ „ „ Conch. Icon., pl. 25, sp. 219.

*Hab.* Cape York, North Australia; 11 fathoms.

### 11.—DRILLIA VARICOSA.

*Pleurotoma varicosa*, Reeve. Proc. Zool. Soc., 1843, p. 187.
„ „ „ Conch. Icon., pl. 16, sp. 141*b*.

*Hab.* York Island, 16 fathoms; Darnley Island, Torres Straits, 20 fathoms, sandy mud bottom; Palm Island, North East Australia, 11 fathoms, bottom mud.

The specimens from the Torres Straits Islands run small. One specimen from Palm Island very large.

### 12.—DRILLIA RADULA.

*Pleurotoma radula*, Hinds. Proc. Zool Soc., 1843, p. 38.
" " Reeve. Conch. Icon., pl. 25, sp. 223.

*Hab.* Cape Grenville, North East Australia, 20 fathoms; Darnley Island, Torres Straits, 20 to 30 fathoms; Katow, New Guinea, 4 to 7 fathoms. Also, Port Stephens, and Port Jackson (Brazier), Straits of Malacca (Hinds).

### 13.—DRILLIA MASTERSI, N. SP.

Shell ovate, solid, reddish brown, depressly flattened at the upper part, whorls 8½, transversely sculptured, centre of upper whorls tuberculated, spotted with white, the last longitudinally rather obliquely ribbed; at the angle they become more like prickly nodules, below somewhat white; suture minutely spirally striated, lip simple, brownish in centre, having an obsolete white sinus below; upper sinus white, deep, and wide, with thick deposit of callus on body whorl, and extending down in a thin plate to the collumellar; canal very short and wide.

Length 5½, breadth 2 lines.

*Hab.* Warrior Reef (west side), near New Guinea; 8 fathoms, sandy mud bottom. Two specimens found (Brazier).

### 14.—DRILLIA SPALDINGI, N. SP.

Shell acuminately turreted, white, whorls 10, somewhat flattened, nodosely angulated at the upper part, suture smooth, centre with obtuse nodules, longitudinally ribbed and cancellated with regular raised striæ; larger and plainer on the last whorl, blotched with brown, canal short, outer lip thin, depressed behind, somewhat like a channel, sinus rather deep and broad, lower small

Length 7, breadth 3 lines.

*Hab.* Bet Island, Torres Straits, 11 fathoms, off a coral bottom; Darnley Island, Torres Straits, 30 fathom, coral and white sandy bottom.

### 15.—DRILLIA (CRASSISPIRA) ALABASTER VAR.

*Pleurotoma alabaster*, Reeve. Proc. Zool. Soc., 1843, p. 181.
" " " Conch. Icon., pl. 8, sp. 65.

*Hab.* Darnley Island, Torres Straits, 30 fathoms; found on a bottom of white sand and broken shells.

### 16.—DRILLIA (CLAVATULA) NITENS.

*Clavatula nitens*, Hinds. Proc. Zool. Soc., 1843, p. 41.
*Pleurotoma nitens*, Reeve. Conch. Icon., pl. 22, sp. 189.

*Hab.* Palm Island, North East Australia, 11 fathoms, mud bottom; Darnley Island, Torres Straits, 20 fathoms, bottom sand and mud; New Guinea, Straits of Macassar, and Malacca (Hinds).

### 17.—CLATHURELLA DARNLEYI, N. SP.

Shell pyramidal, slender, acuminated, six-sided, horny brown, longitudinally ribbed, crossed with raised striæ, somewhat rugose, interstices smooth, whorls 7-8, flattened, suture opaque, sculpture much plainer on the last whorl; inner lip with thin deposit of callus, outer thin, edged with black, sinus wide, cut deep down, canal short.

Length 4 lines, breadth 1½ line.

*Hab.* Darnley Island, Torres Straits, 20 fathoms, bottom sand and mud.

### 18.—CLATHURELLA LANGUIDA.

*Pleurotoma languida*, Reeve. Proc. Zool. Soc., 1845, p. 115.
" " " Conch. Icon., pl. 29, sp. 257.

*Hab.* Darnley Island, Torres Straits; 20 fathoms.

### 19.—CLATHURELLA AMABILIS.

*Clavatula amabilis*, Hinds. Proc. Zool. Soc., 1843, p. 40.
*Pleurotoma amabilis*, Reeve. Conch. Icon., pl. 34, sp. 308.

*Hab.* Darnley Island, Torres Straits; 20 fathoms, sand and mud. Straits of Malacca, 17 fathoms, mud (Hinds).

The original or typical species described by Mr. Hinds, mentions the suture being ornamented with white spots. The specimens dredged by me are ornamented with light brown spots.

### 20.—CLATHURELLA DEBILIS.

*Clavatula debilis*, Hinds. Proc. Zool. Soc., 1843, p. 39.
*Pleurotoma debilis*, Reeve. Conch. Icon., pl. 22, sp. 187.
*Hab.* Darnley Island, Torres Straits, 20 fathoms, sand bottom.

### 21.—CLATHURELLA ARCTATA.

*Pleurotoma arctata*, Reeve. Proc. Zool. Soc., 1845, p. 118.
" " " Conch. Icon., pl. 32, sp. 294.
*Hab.* Darnley Island, Torres Straits, 20 fathoms, mud bottom.

### 22.—CLATHURELLA DONATA.

*Clavatula donata*, Hinds. Proc. Zool. Soc., 1843, p. 43.
*Pleurotoma donata*, Reeve. Conch. Icon., pl. 26, sp. 228.

*Hab.* Katow, New Guinea, 4 fathoms, mud bottom (Brazier). North Coast of New Guinea, 23 fathoms, mud (Mr. Hinds).

### 23.—CLATHURELLA TINCTA.

*Pleurotoma tincta*, Reeve. Proc. Zool. Soc., 1846, p. 5.
" " " Conch. Icon., pl. 38, sp. 347.

*Hab.* Katow, South Coast of New Guinea, 4 fathoms, mud bottom (Brazier).

### 24.—CLATHURELLA DÆDALA.

*Pleurotoma dædala*, Reeve. Proc. Zool. Soc., 1846, p. 6.
" " " Conch. Icon., pl. 38, sp. 335.
*Hab.* Darnley Island, Torres Straits, 30 fathoms, bottom sand.

### 25.—CLATHURELLA FUSOIDES.

*Pleurotoma Fusoides*, Reeve. Proc. Zool. Soc., 1846, p. 6.
" " " Conch. Icon., pl. 38, sp. 349.

*Hab.* Katow, South Coast of New Guinea, 4 fathoms, mud bottom (Brazier); Island of Mindanao, Philippines; found in sandy mud, at the depth of 25 fathoms (Cuming).

### 26.—CLATHURELLA ARGILLACEA.

*Clavatula argillacea*, Hinds. Proc. Zool. Soc., 1843, p. 40.
*Pleurotoma argillacea*, Reeve. Conch. Icon., pl. 25, sp 217.

*Hab.* Darnley Island, Torres Straits; 30 fathoms; sandy mud bottom (Brazier); Straits of Malacca; 17 fathoms, mud (Hinds).

### 27.—CLATHURELLA PYRAMIDULA.

*Pleurotoma pyramidula*, Reeve. Proc. Zool. Soc., 1845, p. 115.
" " " Conch. Icon., pl. 29, sp. 260.

*Hab.* Katow, South Coast of New Guinea; 4 fathoms; mud bottom.

### 28.—CLATHURELLA CRASSILABRUM.

*Pleurotoma crassilabrum*, Reeve. Proc Zool. Soc., 1843, p. 185.
" " " Conch. Icon., pl. 14, sp. 118*a*.

*Hab.* Darnley Island, Torres' Straits; 20 fathoms; sandy mud bottom.

### 29.—CLATHURELLA RAVA.

*Clavatula rava*, Hinds. Proc. Zool. Soc., 1843, p. 39.
*Pleurotoma rava*, Reeve. Conch. Icon., pl. 28, sp. 250.

*Hab.* Katow, South Coast of New Guinea; 4 fathoms, mud.

### 30.—CLATHURELLA SPURCA.

*Clavatula spurca*, Hinds. Proc. Zool. Soc., 1843, p. 29.
*Pleurotoma spurca*, Reeve. Conch. Icon., pl. 34, sp. 12.

*Hab.* Princess Charlotte Bay, North East Australia, 13 fathoms; Cape Grenville, North East Australia, 20 fathoms, mud; Darnley Island, Torres Straits, 30 fathoms, sandy, mud; Katow, South Coast of New Guinea, 4 to 7 fathoms (Brazier); North Coast of New Guinea, Straits of Malacca, 5 to 18 fathoms, mud bottom (Hinds).

### 31.—CLATHURELLA QUISQUALIS.

*Clavatula quisqualis*, Hinds. Proc. Zool. Soc., 1843, p. 44.
*Pleurotoma quisqualis*, Reeve. Conch. Icon. pl. 26, sp. 230.
*Hab.* Darnley Island, Torres Straits, 20 fathoms, sandy bottom.

### 32.—CLATHURELLA RAMSAYI, N. SP.

Shell oblong ovate, somewhat acuminated, longitudinally closely ribbed, corded with fine transverse ridges, interstices deep, white, whorls 6, flat, encircled at the suture with black, showing plainer on the back of last whorl, apex acute, brown, lip thickened, sinus narrow, canal little recurved.

Length 2½ lines, breadth 1 line.

*Hab.* Katow, New Guinea, 4 fathoms; found in the crevice of a piece of coral brought up in the dredge. Only one specimen found.

### 33.—CLATHURELLA BARNARDI, N. SP.

Shell somewhat fusiformly ovate, longitudinally stoutly ribbed every alternate black and white, latticed with fine transverse ridges, interstices shallow, whorls 8, slightly rounded, suture deep, smooth, spire acuminated, apex acute, brown, granulated, lip thickened, white, black behind, sinus wide, above thickened, shallow, canal slightly recurved.

Length 2½ lines, breadth 1 line.

*Hab.* Barnard Islands, No. 3, North East Australia; four specimens found under a large stone.

### 34.—CLATHURELLA MACLEAYI, N. SP.

Shell ovate, elongated white or pink, smooth, shining, somewhat longitudinally obliquely ribbed, ribs rounded, interstices smooth, whorls 8, flattened, strongly striated on the last in front, rather opaque below the suture, lip thickened, brown spot on the lower part, sinus deep and rounded, thickened on the body whorl, canal narrow, short, straight.

Length 3 lines, breadth 1¼ line.

*Hab.* Princess Charlotte Bay, North East Australia, 13 fathoms, coarse sand and mud bottom, specimens white. Cape Grenville, North East Australia, 20 fathoms, white sand and mud bottom, specimens pink or flesh colour. Cape York, North Coast of Australia, 11 fathoms, coarse sand and broken shells, specimens white. Darnley Island, Torres Straits, 20 to 30 fathoms, coarse sand and mud, specimens pink; few white specimens found. Bet Island, Torres Straits, 11 fathoms, coral bottom in company with young *Meleagrina margaritifera*, Linn. Three specimens obtained, white. Katow, South Coast of New Guinea, 4 fathoms, bottom mud; specimens white, few obtained.

### 35.—CLATHURELLA TRICOLOR, N. SP.

Shell ovate, spire acuminated, transversely elevately striated, longitudinally ribbed, interstices minutely granulated, blue-black, ornamented with a white band round the centre of the last whorl, continuous to the suture, whorls 7, slightly convex, centre with yellow grains, above and below dirty blue, sinus narrow, shallow, canal very short, outer lip strongly crenulated, columellar slightly interior of aperture blackish with white band showing.

Length 4 lines, breadth 1½ line.

*Hab.* Palm Island, North East Coast of Australia (Brazier). Three specimens found on the reef under a block of coral.

### 36.—DAPHNELLA SUBULA.

*Pleurotoma subula*, Reeve. Proc. Zool. Soc., 1845, p. 113.
" " " Conch. Icon., pl. 24, sp. 211.

*Hab.* Darnley Island, Torres Straits; 8 fathoms, mud.

### 37.—DAPHNELLA ORNATA.

*Daphnella ornata*, Hinds. Moll. Voyage Sulphur, p. 25, pl. 7, fig. 221.

*Pleurotoma ornata*, Reeve. Conch. Icon., pl. 24, sp. 209.

*Hab.* Darnley Island, Torres Straits; 20 fathoms, sandy mud.

### 38.—DAPHNELLA PLURICARINATA.

*Pleurotoma pluricarinta,* Reeve. Proc. Zool. Soc., 1845, p. 115.
„ „ „ Conch. Icon., pl. 22, sp. 228.

*Hab.* Darnley Island, Torres Straits, 20 fathoms; ten specimens found.

### 39.—DAPHNELLA MARMORATA.

*Daphnella marmorata,* Hinds. Moll. Voyage Sulphur, p. 25, pl. 7, fig. 19.
*Pleurotoma Daphnelloides,* Reeve. Conch. Icon., pl. 24, sp. 206.

*Hab.* Darnley Island, Torres Straits, 30 fathoms, coarse sandy mud; only one specimen found.

### 40.—CYTHARA PONDEROSA.

*Mangelia ponderosa,* Reeve. Conch. Icon., pl. 6, sp. 44.

*Hab.* Darnley Island, Torres Straits, 10 fathoms, coarse sand.

### 41.—CYTHARA CAPILLACEA.

*Mangelia capillacea,* Reeve. Conch. Icon., pl. 2, sp. 10.
„ „ „ Proc. Zool. Soc., 1846, p. 60.

*Hab.* Darnley Island, Torres Straits, 20 fathoms, found in sandy mud.

### 42.—CYTHARA PESSULATA.

*Mangelia pessulata,* Reeve. Proc. Zool. Soc., 1846, p. 63.
„ „ „ Conch. Icon., pl. 6, sp. 38.

*Hab.* Bet Island, Torres Straits; found on the beaches, thrown up after a gale.

### 43.—CYTHARA CYLINDRICA.

*Mangelia cylindrica,* Reeve. Proc. Zool. Soc., 1846, p. 60.
„ „ „ Conch. Icon., pl. 2, sp. 9.

*Hab.* Darnley Island, Torres Straits, 10 to 20 fathoms, mud bottom.

### 44.—CYTHARA ABYSSICOLA.

*Mangelia abyssicola*, Reeve. Proc. Zool. Soc., 1846, p. 62.
„ „ „ Conch. Icon., pl. 5, sp. 30*a*, 30*b*.

*Hab.* Darnley Island, Torres Straits, 10 to 20 fathoms.

### 45.—CYTHARA MACULATA.

*Mangelia maculata*, Reeve. Proc. Zool. Soc., 1846, p. 61.
„ „ „ Conch. Icon., pl. 4, sp. 22*a*, 22*b*.

*Hab.* Darnley Island, Torres Straits, 30 fathoms, coarse sandy bottom; only one specimen found.

### 46.—CYTHARA ANGULATA.

*Mangelia angulata*, Reeve. Proc. Zool. Soc., 1846, p. 64.
„ „ „ Conch. Icon., pl. 8, sp. 62.

*Hab.* Cape York, North Australia, 5 fathoms, sandy bottom.

### 47.—CYTHARA BALTEATA.

*Mangelia balteata*, Reeve. Proc. Zool. Soc., 1846, p. 64.
„ „ „ Conch. Icon., pl. 7, sp. 57.

*Hab.* Barnard Islands, No. 3, North East Australia; one specimen found under a stone;

Darnley Island, Torres Straits, 20 fathoms, coarse sand and broken shells; one specimen obtained, large.

### 48.—CYTHARA GOODALLI.

*Mangelia Goodalli*, Gray, Reeve. Conch. Icon., pl. 7, sp. 58.

*Hab.* Darnley Island, Torres Straits, 10 to 20 fathoms, white sandy bottom.

### 49.—CYTHARA PELLUCIDA.

*Mangelia pellucida*, Reeve. Proc. Zool. Soc., 1846, p. 64.
„ „ „ Conch. Icon., pl. 8, sp. 61.

*Hab.* Darnley Island, Torres Straits, 30 fathoms; bottom fine sand.

### 50.—CYTHARA VITTATA.

*Mangelia vittata,* Hinds. Proc. Zool. Soc., 1845, p. 45.
„ „ Reeve. Conch. Icon., pl. 7, sp. 53.

*Hab.* Warrior Island, Torres Straits.

### 51.—CYTHARA MARGINELLOIDES.

*Mangelia Marginelloides,* Reeve. Proc. Zool. Soc., 1846, p. 60.
„ „ „ Conch. Icon., pl. 1, sp. 6a, 6b.

*Hab.* Hall Sound, New Guinea; found on fine sandy mud flats at low water.

### 52.—CYTHARA BICOLOR.

*Mangelia bicolor,* Reeve. Proc. Zool. Soc., 1849, p. 62.
„ „ „ Conch. Icon., pl. 5, sp. 31.

*Hab.* Darnley Island, Torres Straits. One specimen, slightly sea worn, obtained at 20 fathoms.

### 53.—MANGELIA CONTRACTA.

*Pleurotoma contracta,* Reeve. Proc. Zool. Soc., 1843, p. 185.
„ „ „ Conch. Icon., pl. 14, sp. 116.

*Hab.* Cape York, North Australia, 11 fathoms, sandy mud bottom; Darnley Island, Torres Straits, 20 fathoms, bottom fine white sand; Katow, South Coast of New Guinea, 4 to 7 fathoms; mud bottom.

### 54.—MANGELIA GRACILENTA.

*Pleurotoma gracilenta,* Reeve. Pro. Zool. Soc., 1843, p. 184.
„ „ „ Conch. Icon., pl. 14, sp. 114.

*Hab.* Darnley Island, Torres Straits, 20 fathoms; found with *Mangelia contracta.*

### 55.—MANGELIA UNDATICOSTA.

*Pleurotoma undaticosta,* Reeve. Proc. Zool. Soc., 1845, p. 117
„ „ „ Conch. Icon., pl. 31, sp. 284.

*Hab.* Cape York, North Australia, 11 fathoms; mud bottom; Katow, South Coast of New Guinea, 5 fathoms.

### 56.—MANGELIA HEXAGONALIS.

*Pleurotoma hexagonalis.* Reeve. Proc. Zool. Soc., 1845, p. 118.
,, ,, ,, Conch. Icon., pl. 32, sp. 293.

*Hab.* Bet and Darnley Islands, Torres Straits, 12 to 20 fathoms; Katow, South Coast of New Guinea, 4 fathoms.

Species of Pleurotomidæ were also dredged at the undermentioned localities, the greater part of them being dead and rather sea-worn, also broken in the lip and otherwise destroyed.

From Darnley Island, Torres Straits, 45 species.
Bet ,, ,, ,, 5 ,,
Sue ,, ,, ,, 1 ,,
York ,, ,, ,, 1 ,,
Cape Grenville, North East Australia, 5 species
Princess Charlotte Bay, North East Australia, 3 species
Cape York, North Australia, 15 species
Katow, South Coast of New Guinea, 46 species

And out of that number, 75 species, there are only single specimens; it would be too hazardous to describe from single specimens.

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## Description of a new species of Kangaroo, from New Guinea, by E. PIERSON RAMSAY, F.L.S., &c., Curator of the Australian Museum, Sydney.

### HALMATURUS CRASSIPES. *nov. sp.*

$$\text{In. } \frac{3-3}{1-1} \quad \text{p.m. } \frac{1-1}{1-1} \quad \text{m. } \frac{4-4}{4-4}$$

*Young Female.*—Fur stiff, harsh, and short; general colour, yellowish sandy-brown, deeper on the upper surface where, on the back is it pencilled with black hairs most conspicuously on the dorsal ridge, the hairs being chiefly black at the base and tip, yellow on the central portion; the under surface whitish-grey; the back of the neck and rump of a yellowish tinge; ears, margined outwardly and tipped with black, inside whitish; eyelids, lashes, and eyebrows, black; last joints of the fingers and the nails, black; head and neck pencilled with black, the base and tips of the hairs black; an ill-defined line of a blackish tinge extends from the eye to the nostrils, below which is an indistinct whitish band from below the eye to the upper lip. Hairs on the sides, yellowish with black and grey tips. The yellowish-brown of the rump extends conspicuously along the upper part of the tail for about one-third of its length, after which it fades into an ashy-grey; on the sides and under the surface, a line extending along the apical third of the tail below and tips, blackish; some specimens have a whitish mark across the thighs.

*Adult Male.*—Similar to the female above described, but having the facial features and the markings of the body not so well defined; across the thighs near the joint a short band of white base of the tail brown; scrotum white posteriorly, blackish in front. The throat and under surface, greyish white; hands, feet, and tips of the ears blackish; tail long, comparatively thick and strong, the under surface bare and worn for about three-fourths of its length from the tip, sparingly clothed with harsh wiry hairs; hind legs of moderate length, but the tarsus short and strong; toes, strong and short; nails, very short, thick, strong, and blunt; forearms long, strong, and robust; the hands broad; the fingers short and strong; nails, short, thick, and blunt; ears short and rounded.

This is one of, if not the largest, species of Halmaturus known, and on the whole is a remarkably strong-made animal. The strong fore legs and short hind feet, and its strong tail are evidently well adapted for traversing stony regions; the under surface of the tail is bare to within a short distance of the rump, and the remainder of this organ but scantily clothed with wiry hair.

Total length from tip of nose to tip of tail, 5 feet 8 inches (*skin,*) Head, 7 inches (skull, 6·1, *cleaned*).

Tail, 2 feet 6 inches.

Tarsus (*broken*), about 14 inches.

Hind foot, 9 inches; longest toe, 3 inches; its nail, 1·1 x 0·5 x 0·58.

Ears, 1·9 x 2·9 in length.

From snout to centre of eye, 3·6 inches.

From snout to ear, 6 inches.

Forearm, 8½ inches; hand in width, 1·8, 3·3 in length to tips of nail.

Third finger longest, its nail 0·9 x 0·4.

This fine species appears to be tolerably plentiful about Port Moresby, New Guinea, and is one of the novelties discovered by Messrs. Broadbent and Petterd, by whom some young specimens of it were first brought to Sydney.

For the adult male above described, the Museum is indebted to the generosity of Mr. Gouldie, botanist, at present on a collecting tour in the Southern portion of New Guinea, and from whom we have lately received some valuable donations.

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## The COLEOPTERA of the Chevert Expedition—by WILLIAM MACLEAY, F.L.S.

It was my wish and intention to have given you, on the present occasion, a complete description of the Coleoptera collected during the cruise of the Chevert. I have been unable, I regret to say, from various causes, to carry out my intention as a whole, but I now lay before you, as an instalment, a few notes on those of the Geodephagous Coleoptera of New Guinea, which were taken during the voyage.

It may be recollected that, soon after my return from New Guinea, I read in this room a short Paper on the Zoological results of the Chevert's Expedition, and I then stated that the very great scarcity of the carnivorous ground beetles in that country was very remarkable. That it is so, may be inferred from the fact that the six species which I now describe were the only representatives of the families *Cicindelidæ* and *Carabidæ*, taken at Katow and Hall Sound, notwithstanding a diligent search by experienced collectors.

### CICINDELA MAINO.

Viridi-cuprea subnitida subtus albo-pilosa, capite ad oculos bipunctato, thorace subquadrato antice angustato postice profunde transversim impresso lateribus haud rotundatis, elytris oblique truncatis opacis viridi-nigris albo-marginatis—margine triramoso—apice sutura postice guttis que quatuor (3 e basi juxta medium 1 infra scutellum) albidis, pedibus tenuibus longissimis.

Long. 6 lin., lat., 1¾ lin.

*Hab.* Katow, New Guinea.

This species has an affinity to *Cicindela araneipes*, Schaum, but is much larger and very differently marked. The labium is short, broad, truncate, armed with numerous setæ, and of a yellowish colour. The mandibles are yellow, with the teeth and apex black. The palpi are also yellow, with the terminal joint black, and are densely clothed with white hair. The antennæ are long and slender, the first four joints having a bright metallic hue. The head is of a dullish coppery hue, very densely and finely punctate, flat above, and vertical in front, with a sharp puncture on each side, close to the eyes. These last are large and prominent laterally. The thorax is coppery on the sides, almost black in the middle, finely shagreened, much narrower at the apex than at the base, not rounded on the sides, and truncated in front and behind, with the median line lightly marked, a deep transverse impression at the base, and the posterior angles acute. The scutellum is triangular and smooth. The elytra are a little broader than the thorax, long, parallel-sided, and obliquely truncate, especially in the female. The colour is a dark opaque green, margined with pale yellow. From the lateral yellow border there are three branches, one short and very oblique below the humeral angle; another about the middle, longer, and not so oblique; the third near the apex, and almost vertical. The posterior two-thirds of the suture is narrowly edged with yellow, and there are, besides, on each elytron, four spots of the same colour—one long and narrow, near the scutellum, the other three in a line extending from the base to the middle of the elytron. The under surface of the body has a more metallic lustre than the upper, and is clothed densely with white pile. The legs are extremely fragile, and of immense length, the posterior thighs being as long as the entire length of the insect, and the tibiæ and tarsi not much shorter.

A number of specimens of this very fine *Cicindela* were captured on the sea beach at the mouth of the Katow River, near the village of Mohatta, in July last. The name I have given to the species—" Maino "—is that of the chief of the village.

This insect, with *Cicindela tenuipes Dej. Psammodromus Chevr.* and *araneipes* Schaum, constitutes a very distinct group, characterized chiefly by the extreme length and slenderness of the legs, and the form of the thorax, which may be described as that of a truncated cone. *Cicindela longipes* Fabr. and *anchoralis* Chevr. may be looked upon as intermediate between this and the *C. Ypsilon* group. I may here mention that one of the *Ypsilon* group —*Cicindela Rafflesia* Chaud. (*Montraveli Blanch*)—was taken in considerable number near Cape York, on sandy beaches.

### PHEROPSOPHUS PAPUENSIS.

Niger opacus, capite rufo-testaceo inter oculos nigro, thorace elongato subcordiformi antice sparsim punctato, elytris acute costatis macula transversa rufa, antennis palpis pedibusque rufo-testaceis.

Long., 7 lin.; lat. elyt., 3 lin.

*Hab.* Katow, New Guinea.

Only one specimen of this insect was found. Besides the difference in colour and marking, the elongate thorax separates it at once from our common Australian species, *P. verticalis.* It seems to approach nearer to *P. Australis,* but Count Castlenan makes no mention of the elongate thorax in his description of that species.

### PHLŒODROMIUS PLAGIATUS.

Testaceo-rufus nitidus, elytris obsolete striatis fascia magna nigra.

Long., 4 lin.; lat., 1½ lin.

*Hab.* Yule Island, Hall Sound, New Guinea.

One specimen only was found, and that under bark. The whole insect is of a nitid testaceous red colour, excepting a broad black fascia occupying the middle of the elytra. The eyes are white, the feet short and robust, and the elytra very indistinctly striate. This genus, of which only one species was previously known—*P. piceus* mihi—will be found described in the Transactions of the Entomological Society of New South Wales, vol 2, p. 85.

### LEBIA PAPUENSIS.

Rufo-testacea subnitida, thorace brevi late marginato angulis posticis rectis subrecurvis anticis late rotundatis margine seta prope angulos anticos et in angulis posticis instructo, elytris rufo-brunneis latis sinuato-truncatis fortiter striatis interstitiis convexis fascia obscura nigra subapicali.

Long., 3 lin.

*Hab.* Hall Sound, New Guinea.

Of this species, also, only one was caught, and also under bark. The colour is testaceous red, becoming brown on the elytra, which have an indistinct black fascia near the apex. The head is flat between the eyes, and has in front of them, between the insertion of the antennæ, two short longitudinal impressions. The eyes are black, round, and prominent. The thorax is of the width of the head and eyes, short, transverse, very much rounded at the anterior angles, broadly margined on the sides, square, acute, and recurved at the posterior angles, and finely acuducted on the dorsal surface, with the median line well marked, and with a long seta at each posterior angle and on the anterior third of the margin. The elytra are broad and flat; they get broader from the humeral angle, terminate in a sinuated truncation, and are strongly striated, with the interstices broad and convex—the third with an impression near the apex—and the lateral stria marked with large distinct punctures.

### MISCELUS MORIOFORMIS.

Niger nitidus antennis palpisque piceis opacis, capite plano antice emarginato, thorace subcordiformi postice truncato lateribus setigeris setis 1 in angulo postico 2 ante medium locatis, elytris subopacis parallelis novemstriatis interstitiis planis setis marginalibus longissimis—1 apicali, 2 distantibus prope angulis apicalibus, 3 subhumeralibus, pedibus nigro-piceis.

Long., 4½ lin. ; lat. 1¼ lin.

*Hab.* Hall Sound, New Guinea.

This insect has very much of the form and appearance of a *Morio*, and, like the species of that genus, was found under the bark of a decayed tree. I have never seen anything like it in Australia, and, as the only two species hitherto known come from Java, I presume it may be looked upon as a Netherlands-Indian form. I have never seen *Miscelus unicolor*, Putz, nor can I find a description of it, but it is most unlikely that it can be identical with the present species. The typical species, *M. Javanus*, is in my possession, and it is very different in many respects. Only one specimen was captured.

### HARPALUS PAPUENSIS.

Niger nitidus subconvexus, capite subplano laevi antice leviter impresso, thorace laevi subquadrato antice leviter emarginato (angulis sub-productis) postice truncato (angulis rotundatis) medio postice leviter striato basi utrinque impresso, elytris striatis interstitiis subplanis (interstitia secunda ad basin breviter striata tertia prope apicem interne punctata) marginibus lateralibus et apicalibus rugose punctatis, antennis palpis tarsisque rufopiceis, tibiis anticis extus prope apicem minute tridentatis.

Long., 5 lin ; lat., 1¾ lin.

*Hab.* Hall Sound, New Guinea.

A few of this species was found under stones.

## MONDAY, 26TH JUNE, 1876.

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WILLIAM MACLEAY, ESQ., President, in the Chair.

The following donations were announced :—

The Mollusca of New Zealand.
The Echinodermata of New Zealand.
The Fishes of New Zealand, by the Author, F. W. Hutton, Esq., Otago.

### MEMBER ELECTED.

W. F. Barkas, Esq., M.R.C.S.E.

The following papers were read :—

## List of Marine Shells, with Descriptions of the new species collected during the Chevert Expedition—by JOHN BRAZIER, C.M.Z.S.

### CLASS GASTEROPODA.
### SUB-ORDER PROBOSCIDIFERA.
### FAMILY MURICIDÆ.

### 1.—MUREX TENUSPINA.

*Murex tenuspina*, Lam., Anim. Sans. Vert. tome 7, p. 158.
„ „ Reeve, Conch. Icon., pl. 21., species 85.

*Hab.* Darnley Island, Torres Straits, 20 to 30 fathoms, sandy-bottom, brought up on the swabs or tangles.

### 2.—MUREX BREVISPINA.

*Murex brevispina*, Lam., Anim. Sans. Vert, tome 7, p. 159.
„ „ Reeve, Conch. Icon., pl. 19, species 77.

*Hab.* Princess Charlotte Bay, North East Australia, 14 fathom, sandy mud bottom ; Cape Grenville, North East Australia, 20 to 30 fathom, sandy bottom, in places very stony, brought up in the dredge, with *Spongiadæ and Echinodermata* ; Cape York, North Australia, 6 to 11 fathoms, mud bottom, specimens dead. Reeve gives as the habitat of this fine species the Coast of Arabia, a very great error; I have received specimens from Nicol Bay, North-West Coast of Australia, thrown on shore after gales.

### 3.—MUREX EXIMIUS, N. SP.

Shell thin, club-shaped, whorls 7, roundly convex, suture deeply excavated, three varicose, having two somewhat blunt-pointed spines, one line in length on each varice; varices rounded, rather oblique, excavated behind, between longitudinally nodulously fine-ribbed; transversely striated, interstices with much finer striæ, cream colour, blotched below the suture with pale chestnut, before and behind the varices of the same colour, aperture nearly round, inner lip smooth, outer denticulated at the edge, interior of aperture tinged with violet, canal elongated, straight.

Length 22, breadth 8½, alt. 7 lines.

*Hab.* Darnley Island, Torres Straits, 30 fathoms, brought up on the tangles, bottom sand.

This beautiful species differs from *Murex rectirostris*, Sowerby, in having five longitudinal somewhat nodose ribs, with transverse elevated lines, having three varices with two spines on each, the first at the back of the lip little above the centre, the second at the second varice on the back, the third at the varice on the pillar or columella side, the other three spines placed on the second whorl, the other five whorls are destitute of spines. The shell has a three-sided appearance.

### 4.—MUREX (CHICOREUS) RAMOSUS.

*Murex ramosus*, Linn, Gmel., p. 3528, No. 13.
„ *inflatus*, Lam., Anim. Sans. Vert., tome 7, p. 160.
„ *ramosus*, Reeve, Conch. Icon., pl. 1, species 3.

*Hab.* Darnley Island, Torres Straits, found on the reefs.

This is the large common and well-known species found in gardens with rock work, also used to ornament fireplaces.

### 5.—MUREX (CHICOREUS) ADUSTUS.

*Murex adustus*, Lam., Anim. Sans. Vert., tome 7, p. 162.
„ „ Reeve, Conch. Icon., pl. 8, sp. 29.

*Hab.* Darnley Island, Torres Straits, found on the reef under coral.

### 6.—MUREX (CHICOREUS) CORRUGATUS.

*Murex corrugatus*, Sowerby, Proc. Zool. Soc., London, 1840, p. 142.

„ „ Reeve, Conch. Icon., pl. 13, species 52.

*Hab.* Palm Island, North-East Coast of Australia.

Two specimens brought up on the tangles from 8 fathoms, muddy bottom.

### 7.—MUREX (CHICOREUS) AXICORNIS.

*Murex axicornis*, Lam., Anim. Sans. Vert., tome 7, p. 163.

„ „ Reeve, Conch. Icon., pl. 15, fig. 37.

*Hab.* Palm Island, North East Coast of Australia.

One specimen brought up on the tangles from 8 fathoms, muddy bottom.

### 8.—MUREX (CHICOREUS) CERVICORNIS.

*Murex cervicornis*, Lam., Anim. Sans. Vert., tome 7, p. 163.

„ „ Reeve, Conch. Icon., pl. 16, species 66.

*Hab.* Darnley Island, Torres Straits, 20-30 fathoms.

This species is very rarely to be found in collections, but at the depth of 20 and 30 fathoms it is very common at Darnley Island. I have received dead and beach-worn specimens from Nicol Bay, North-West Coast of Australia, thrown up after gales. The specimen figured by Reeve in Conchologia Iconica 1845, gives no locality. Lamarck, in his "Animaux Sans Vertébres, 1822, says, "Habite les mers de la Nouvelle-Hollande. Espéce trés rare et fort recherchée."

### 9.—MUREX (PTERMOTUS) PELLUCIDUS.

*Murex pellucidus*, Reeve, Conch. Icon., pl. 14, sp. 54.

„ *trigonularis*, Sowerby, not of Lamarck.

*Hab.* Darnley Island, Torres Straits.

This fine and rare species was got at the depth of 30 fathoms, white sandy mud bottom, brought up in the tangles.

### 10.—MUREX (OCINEBRA) TETRAGONUS.

*Murex tetragonus*, Broderip, Proc. Zool. Society, 1832, p. 174.

„ *breviculus*, Reeve, not Sowerby.

*Hab.* Bet Island, Torres Straits, 11 fathoms.

Reeve in Concologia Iconica, pl. 26, species 118, figures ***Murex breviculus*** of Sowerby, and puts ***Murex tetragonus***, Broderip down as a synonym. The specimen dredged answers to Broderip's description of ***Murex tetragonus***; and does not answer either to Reeves' description or figure; the shell figured by Reeve is a true figure of *Murex breviculus*, Sowerby, a much larger and finer shell.

### 11.—MUREX (OCINEBRA) CONFUSA, N. SP.

Shell somewhat pyriformly ovate, rather rough, spire short, sharp-pointed, whorls 5½, five varicose, on the whorl ending in the form of a canal; varices laminated, interstices between the varices crossed with four laminated ribs; on the last whorl below somewhat smooth, forming hollow pits, suture minutely laminated, the varices on the upper whorls small, more like rounded nodules, laminated and excavated behind, white stained with brown between the varices, aperture roundly ovate, interior of aperture glossy white, edge of peristome denticulated, canal rather short, attenuated, and recurvated.

Length 13½, breadth 7½, height 6½ lines.

*Hab.* Darnley Island, Torres Straits.

Only one specimen of this beautiful shell was brought up on the tangles from the depth of 30 fathoms, white sand and coral bottom.

### 12.—MUREX (MURICIDEA) MUNDUS.

*Murex exiguus*, Reeve, Proc. Zool. Soc., 1845, p. ?
,, *mundus*, Reeve, Conch. Icon., 1845, pl. 32. species 166.

*Hab.* Darnley Island, Torres Straits, 20 fathoms, coral bottom.

This species is not described in Proc. Zool. Society, as Mr. Reeve quotes in Conch. Icon.

### 13.—MUREX (MURICIDEA) SCALARIS.

*Murex scalaris*, A. Adams, Proc. Zool. Soc., London, 1853, p. 71.

*Hab.* Darnley Island, Torres Straits, 30 fathoms, sandy bottom.

## FAMILY TRITONUDÆ.

### 14.—TRITONIUM (SIMPULUM) PILEARE.

*Murex pileare*, Linn. Gmel., p. 3534, No. 31.
*Triton pileare*, Lam., Anim. Sans Vert., tome 7, p. 182.
*Hab.* Darnley Island, Torres Straits.

### 15.—TRITONIUM (SIMPULUM) GEMMATUM.

*Triton gemmatus*, Reeve, Proc. Zool. Soc., 1844, p. 117.
„ „ Conch. Icon., pl. 15, species 60 c.

*Hab.* Barrow Island, North East Australia; Darnley Island, Torres Straits, under stones at low water.

### 16.—TRITONIUM (CABESTANA) LABIOSUM.

*Murex labiosus*, Wood, Supp. Index. Testac., p. 15, pl. 5, fig. 18.
*Tritonium rutilum*, Menke, Moll. Nov. Holl., p. 25, No. 120.
„ *labiosum*, Angas, Proc. Zool. Soc. London, 1871, p. 87.
*Triton labiosus*, Reeve, Conch. Icon., pl. 14. f. 52 a, b, c.

*Hab.* Darnley Island, Torres Straits. Two specimens found under stones. Also found at Shark Island, Port Jackson (Brazier).

### 16a.—TRITONIUM (CYMATIUM) LOTORIUM.

*Triton lotorium*, Linn. Gmel. p. 3533, No. 30.
„ „ Lam., Anim. Sans Vert. tome 7, p. 182.
„ „ Reeve, Conch. Icon., pl. 6, species 19, b.
*Hab.* Brooke Island, North East Coast of Australia.

### 17.—TRITONIUM (GUTTURNIUM) SACROSTOMA.

*Triton sacrostoma*, Reeve, Proc. Zool. Soc. London, 1844, p. 113.
„ „ Conch. Icon., pl. 7, species 21.
*Hab.* Darnley Island, Torres Straits.

### 18.—TRITONIUM (GUTTURNIUM) GRACILE.

*Triton gracilis*, Reeve, Proc. Zool. Soc., London, 1844, p. 117.
„ „ „ Conch. Icon., pl. 15, species 58 a, b.

*Hab.* Princess Charlotte Bay, North East Australia, 14 fathoms; Darnley Island, Torres Straits, 20 to 30 fathoms.

### 19.—TRITONIUM (GUTTURNIUM) ENCAUSTICUM.

*Triton encausticus*, Reeve, Proc. Zool. Soc., London, 1844, p. 115.

„ „ „ Conch. Icon. pl 12, species 43.

*Hab.* Darnley Island, Torres Straits, 30 fathoms.

### 19a.—TRITONIUM (EPIDROMUS) ANGASI. N. SP.

Shell fusiform, turrited, thin, with 8 distinct rounded varices; spire slightly twisted in the centre, apex obtuse, whorls 7, slightly convex, sculptured with longitudinal fine ribs, transversely lined, interstices with very minute striæ, suture rather deep, crenulated at the edge, whitish, besprinkled with chestnut brown spots, blotch of the same colour somewhat square in front of the varices; the back of the last whorl showing more of the irregular nearly obsolete brown spots; columella or inner lip straight, thickened with a white expanded plate of callous, smooth, outer lip thin at its edge, thickened behind, minutely denticulated within, aperture oblong ovate, white within, canal very short, recurved.

Length 10, breadth 3, height 2½ lines, length of aperture 3 lines.

*Hab.* Darnley Island, Torres Straits, 30 fathoms, rough sand and coral bottom. Sue Island, Torres Straits, 11 fathoms, found with mother-o'-pearl *Margaritifera margaritifera*, Linn.

I have named it with great pleasure in honour of Mr. George French Angas, F.L.S., C.M.Z.S., London, whose indefatigable exertions have made us acquainted with many new and rare species of shells from Australia and Western Polynesia.

It differs from *Epidromus Coxi*, Brazier, from New South Wales, by having coarser sculpture, varices larger, more distorted at the third and fourth whorl from the aperture, by one slightly bulging to the right, and the other to the left, the outer lip thin at the edge, very much thickened behind, and more strongly crenulated at the suture.

### 20.—DISTORSIO DECIPIENS.

*Triton decipiens*, Reeve, Proc. Zool. Soc., London, 1844, p. 121.

„ „ „ Conch. Icon. pl. 20 species 102.

*Hab.* Darnley Island, Torres Straits, 20 fathoms, sandy bottom.

### 21.—BURSA RANA.

*Murex rana*, Linn ; Martini, Conch. Vol. 4, pl. 133, fig. 1270-71.

*Ranella albivaricosa*, Reeve, Proc. Zool. Soc., London, 1844, p. 136.

*Bursa rana*, H. and A. Adams, Genra of Recent Mollusca, 1853. Vol. 3., pl. 11, fig. 3 3a. *Ranella albivaricosa*, Reeve, Conch. Icon, pl. 1, species 2.

*Hab.* Darnley Island, Torres Straits, 20 to 30 fathoms, sandy mud, Cape Grenville, North-East Coast of Australia, 20 fathoms.

### 22.—BURSA (LAMPAS) BITUBERCULARIS.

*Ranella bitubercularis*, Lam., Anim. Sans Vert., tome, 7, p. 153.

„ „ Reeve, Conch. Icon., pl. 7, species 40.

*Hab.* Darnley Island, Torres Straits, 15 fathoms, bottom coral stones and broken shells.

### 23.—BURSA (APOLLON) GYRINA.

*Murex gyrinus*, Linn. Gmel., p. 3531.

*Ranella ranina*, Lam., Anim. Sans Vert., tome 7, p. 154.

„ *gyrinus*, Reeve, Conch. Icon., pl. 8, species 49.

*Hab.* Darnley Island, Torres Straits, found under stones on the reefs.

### 24.—BURSA (APOLLON) PUSILLA.

*Ranella pusilla*, Broderip, Proc. Zool. Soc., London, 1832, p. 194.

„ „ Reeve, Conch. Icon. pl. 8, species 44.

*Hab.* Cape Grenville, North-East Australia, 20-30 fathoms; Princess Charlotte Bay, North-East Australia, 15 fathoms; Cape York, North Australia, 5-11 fathoms; Darnley Island, Torres Straits, 12-20-30 fathoms; all sandy mud bottom.

### 25.—BURSA (APOLLON) ANCEPS.

*Ranella anceps*, Lam., Anim. Sans Vert., tome 7, p. 154.

„ *pyramidalis*, Broderip, Proc. Zool. Soc., London, 1832, p. 194.

„ *anceps*, Reeve, Conch. Icon., pl. 8, species 48.

*Hab.* West side of Warrior Reef, Torres Straits.

One living specimen was found in a cluster of ***Madrepores***; dead specimens also dredged off Katow, New Guinea, 5 fathoms; from 5 to 8 lines long.

### 26.—BURSA (EUPLEURA) PULCHELLA.

*Ranella pulchella*, Forbes, Moll. Voyage of H.M.S. Rattlesnake, vol. 2, p. 328, pl. 3, fig. 6 a, b.

*Hab.* Palm Island, North-East Australia, 8 fathoms, mud bottom; Cape York, North Australia, 5 to 11 fathoms, sandy mud bottom; Cape Grenville, North-East Australia, 20 fathoms, sandy bottom; Darnley Island, Torres Straits, 20-30 fathoms white sandy mud bottom; West side of Warrior Reef, near Katow, New Guinea, 8 fathoms, bottom hard blue mud.

## FAMILY BUCCINIDÆ.

## SUB-FAMILY NASSINÆ.

### 27.—PHOS SENTICOSUS.

*Buccinum senticosum*, Linn. sp. List., pl. 967, fig. 22.

*Phos senticosus*, Sowerby, in Thes. Conch., vol. 3, p. 89, pl. 221, figs. 9-11.

*Hab.* Cape Grenville, North-East Australia, 20 fathoms, sandy bottom; Darnley Island, Torres Straits, 20-30 fathoms, sandy mud bottom.

### 28.—PHOS ROSEATUS.

*Phos roseatus*, Hinds, Zool. Voy. Sulphur Moll. p. 38, pl. 10, fig. 7-9.

„ „ Sowerby in Thes. Conch. vol. 3, p. 90, pl. 221, fig. 1-2.

*Hab.* Darnley Island, Torres Straits, 30 fathoms, white sandy mud bottom. Four fine specimens obtained.

### 29.—PHOS SCALAROIDES.

*Phos scalaroides*, A. Adams, Proc. Zool. Soc., London, 1850, p. 154.

„ „ Sowerby in Thes. Conch., vol. 3 p., 90 pl. 221, fig. 13.

*Hab.* Cape Grenville, North-East Australia, 30 fathoms, sandy mud bottom, four specimens found ; Cape York, North Australia, 11 fathoms, sand and broken shells, two specimens found ; Darnley Island, Torres Straits, 20-30 fathoms, sandy mud bottom, five specimens found ; Bet and Sue Islands, Torres Straits, 11 fathoms coral and sand bottom, two specimens found.

### 30.—PHOS RUFO-CINCTUS.

*Phos rufo-cinctus*, A. Adams, Proc. Zool. Soc., London, 1850, p. 154.

„ „ Sowerby in Thes. Conch. vol. 3, p. 91, pl. 221. fig. 14.

*Hab.* Darnley Island, Torres Straits, 20 fathoms, sandy mud bottom, one specimen found.

### 31.—PHOS (STRONGYLOCERA) SPINICOSTATUS.

*Phos spinicostatus*, A. Adams, Proc. Zool. Soc., London, 1850, p. 154.

„ „ Sowerby in Thes, Conch., vol. 3, p. 93, pl. 222, fig. 44, 45.

*Hab.* Darnley Island, Torres Straits, 20 fathoms, sandy bottom ; four specimens found.

### 32.—NASSARIA SUTURALIS.

*Hindsia suturalis*, A. Adams, Proc. Zool. Soc., London, 1853, p. 183.

*Nassaria suturalis*, Sowerby in Thes, Conch. vol. 3, p. 86, pl. 220, fig. 15, 16.

*Hab.* Cape York, North Australia, 11 fathoms, mud bottom; Warrior Reef, west side 8 fathoms, hard mud bottom ; Katow, New Guinea, 5 fathoms, soft mud, specimens all dead.

### 33.—NASSA CORONATA.

*Buccinum coronatum*, Lam., Anim. Sans Vert., tome 7, p. 276.

*Nassa coronata*, Reeve, Conch. Icon. pl. 3, species 20 a, b, c.

*Hab.* Palm Island, North-East Australia ; Cape Grenville, North-East Australia ; Bet Island, Torres Straits, found at low water crawling on the sand beaches.

### 34.—NASSA ARCULARIA.

*Buccinum arcularia*, Linn. Gmelin, p. 3480.

„ „ Lam., Anim. Sans Vert., tome 7, p. 276.

*Nassa arcularia*, Reeve, Conch. Icon. pl. 4, species 25.

*Hab.* Darnley Island, Torres Straits, found crawling on the reefs at low water.

### 35.—NASSA LURIDA.

*Nassa lurida*, Gould, Proc. Boston Soc., 1850, p. 153.

„ *dispar*, A. Adams, Proc. Zool. Soc., London, 1851, p. 96.

„ *dispar*, Reeve, Conch. Icon., 1853, pl. 7, species 45.

„ *graphitera*, Beck, Voy. au Pol. Sud. p. 80, pl. 21, fig. 28, 29.

*Hab.* Home Islands, off Cape Grenville, North-East Australia, found crawling on sandy mud flats at low water; Hall Sound, New Guinea, found on sand flats at low water.

### 36.—NASSA DELICATA.

*Nassa delicata*, A. Adams, Proc. Zool. Soc., London, 1851, p. 99.

„ „ Reeve, Conch. Icon., pl. 27, species 180.

*Hab.* Barnard Islands, No. 3, North-East Australia. One splendid specimen found under a block of coral.

### 37.—NASSA LACHRYMOSA.

*Nassa lachrymosa*, Reeve, Conch. Icon., pl. 8, species 52.

*Hab.* Mud Bay, Cape York, North Australia. Found at low water crawling on the sand beaches.

### 38.—NASSA (NIOTHIA) GEMMULATA.

*Buccinum gemmulatum*, Lam., Anim. Sans Vert., tome 7, p. 271.

*Nassa gemmulatum*, Reeve, Conch. Icon. pl. 5, species 29.

„ *clathrata*, Lam., Encyclop, pl. 394, f, 5 a, b.

„ *gemmulata*, Deshayes.

*Hab.* Cape Grenville, North-East Australia, 20 fathoms, sandy mud bottom; Princess Charlotte Bay, North-East Australia, 14 fathoms, sandy bottom; Cape York, North Australia, 5-11 fathoms, sandy mud bottom; Darnley Island, Torres Straits, 20-30 fathoms, white sand and broken coral bottom.

### 39.—NASSA (NIOTHIA) MARGINULATA.

*Buccinum marginulatum*, Lam., Anim. Sans Vert., tome 7, p. 278.

*Nassa marginulata*, Reeve, Conch. Icon., pl. 7. sp. 43.

*Hab.* Darnley Island, Torres Straits, 20-30 fathoms, sand and coral bottom.

### 40.—NASSA (NIOTHIA) ALBESCENS.

*Buccinum albescens*, Dunker, Abbild, und Besch, 1849, p. 68, pl. 2, fig. 15.

*Nassa albescens*, Reeve, Conch. Icon. pl. 15, species 100.

„ „ *bicolor*, Homb. and Jacq., Voy. au Pol. Sud., p. 84, pl. 21, fig. 41, 42.

*Hab.* Darnley Island, Torres Straits, 5 fathoms, sand bottom.

### 41.—NASSA (NIOTHIA) DENSIGRANATA.

*Nassa densigranata*, Reeve, Conch. Icon., 1854, pl. 27, species 181.

*Hab.* Darnley Island, Torres Straits, 20 fathoms, sand and coral bottom.

### 42.—NASSA (NIOTHIA) RAVIDA.

*Nassa ravida*, A. Adams, Proc. Zool. Soc., London, 1851, p. 97.

„ *ravida*, Reeve, Conch. Icon., pl. 11, species 68.

*Hab.* Darnley Island, Torres Straits, 20 fathoms, sand and coral bottom.

### 43.—NASSA (ARCULARIA) THERSITES.

*Buccinum Thersites*, Brug., Lam. Anim. Sans Vert., tome 7, p. 277.

*Nassa Thersites*, Lam. Encyclop., pl. 394, fig. 8 a, b.

*Hab.* Hall Sound, New Guinea. Found on the sandy mud flats at low water.

### 44.—NASSA (ARCULARIA) CALLOSA.

*Nassa callosa*, A. Adams, Proc. Zool. Soc., London, 1851, p. 98.

„ Reeve, Conch. Icon., pl. 28, species 185.

*Hab.* Darnley Island, Torres Straits, 5, 10, 15, 20 fathoms, sandy mud bottom.

### 45.—NASSA (ARCULARIA) NANA.

*Nassa* (*Eione*) *nana*, A. Adams, Proc. Zool. Soc., London, 1851, p. 102.

*Nassa nana*, Reeve, Conch. Icon. pl. 25, species 164.

*Hab.* Cape York, North Australia, 5 fathoms, muddy bottom.

### 46.—NASSA (ALECTRION) SUTURALIS

*Buccinum suturale*, Lam., Anim. Sans Vert., tome 7, p. 269.

*Nassa suturalis*, Reeve, Conch. Icon., pl. 1, species 4.

*Hab.* Darnley Island, Torres Straits, 10 fathoms, coral and sand bottom. One specimen found.

### 47.—NASSA (ALECTRION) RUTILANS.

*Nassa rutilans*, Reeve, Conch. Icon., pl. 22, species 147.

*Hab.* Darnley Island, Torres Straits, 30 fathoms, sand and mud bottom.

### 48.—NASSA (ZEUXIS) CRENULATA.

*Buccinum crenulatum*, Brug., Encyclopédie Methodique, pl. 394, f. 6.

*Buccinum crenulatum*, Lam., Anim. Sans Vert, tome 7, p. 267.

*Nassa crenulata*, Reeve, Conch. Icon. pl. 1, sp. 2.

*Hab.* Cape Grenville, North-East Australia, 20 fathoms, sandy mud; Darnley Island, Torres Straits, 20-30 fathoms, sandy mud bottom.

### 49.—NASSA (ZEUXIS) SEMIPLICATA.

*Nassa semiplicata*, A. Adams, Proc. Zool. Soc., London, 1851, p. 107.

*Hab.* Mud Bay, Cape York, North Australia. One specimen found crawling on the sandy beach.

### 50. NASSA (TELASCO) PICTA.

*Buccinum pictum*, Dunker, Phil. Abild., t. 2, f. 6.

*Nassa picta*, Dunker, Zeitschrift, für Malac. 1846, p. 172.

,, ,, Reeve, Conch. Icon., pl. 2, species 9 a, b.

*Hab.* Barnard Islands, No. 3, North-East Australia. One specimen found under a block of coral.

### 51.—NASSA (TELASCO) LUCTUOSA.

*Nassa luctuosa*, A. Adams, Proc. Zool. Soc. London, 1851, p. 105.

„ „ Reeve, Conch. Icon., pl. 16, species 109.

*Hab.* Hall Sound, New Guinea. Found on the sands at low water.

### 52.—NASSA (HEBRA) VIBEX.

*Buccinum vibex*, Say, American Conchology, pl. 57.

*Nassa vibex*, A. Adams, Proc. Zool. Soc., London, 1851, p. 101.

„ „ Reeve, Conch. Icon., pl. 12, species 75.

*Hab.* Hall Sound, New Guinea. Found on the sand beaches at low water.

### 53.—NASSA (HEBRA) GRUNERI.

*Buccinum Gruneri*, Dunker, Zeitschrift, für Malac. 1846, p. 171.

*Nassa Gruneri*, Reeve, Conch. Icon., pl. 12, species 81.

*Hab.* Hall Sound, New Guinea. Found on the sand beaches at low water with *Nassa vibex*.

### 54.—NASSA (HIMA) UNIFASCIATA, var.

*Nassa unifasciata*, Pease, American Journal Conchology ?

*Hab.* Palm Island, North-East Australia, 8 fathoms, muddy bottom ; Home Islands, off Cape Grenville, North-East Australia, 15 fathoms, sandy mud bottom ; Cape York, North Australia, 5-11 fathoms, sandy mud bottom ; Bet and Darnley Islands, Torres Straits, 11, 20, 30 fathoms, hard sandy mud bottom ; Katow, New Guinea, 5 fathoms, mud bottom.

### 55.—NASSA (HIMA) DERMESTINA.

*Nassa dermestina*, Gould, American Expl. Exped., 1852.

*Hab.* Darnley Island, Torres Straits. Two specimens found under stones at low water ; seven dead dredged at 30 fathoms, sandy mud bottom.

### 56.—NASSA (HIMA) MIROSTOMA.

*Nassa mirostoma*, Pease, American Journal, Conch., 1867, vol. 3, p. 22.

*Hab.* Palm Island, North-East Australia.

Two specimens found under stones at low water. I obtained this same species at the Samoan Islands in 1865.

## LIST OF AUSTRALIAN GAME BIRDS and other species which should be protected by the "Game Preservation Act,"—by E. PIERSON RAMSAY, F.L.S., Curator of the Museum, Sydney.

| Local or Vulgar and Scientific Name. | Months of Breeding. | Distribution of Species. | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | N. S. W. | N. Aust. | Queensland | Victoria. | S. Aust. | Tasmania. | West Aust. |
| Laughing Jackass or Giant Kingfisher (DACELO GIGAS) | May, June, July, August, September and October. | * | | * | * | * | | |
| Leache's Giant Kingfisher (DACELO LEACHII) *Vig. and Horsf.* ... ... ... | | | * | * | | | | |
| and (DACELO CERVINA) *var.* | | | | *? | | | | |
| The Lyre-bird or Menura (MENURA SUPERBA) ... | | * | | | | | | |
| Port Phillip Lyre-bird (M. VICTORIÆ) *var.* ... ... | | * | | | * | * | | |
| Prince Albert's Lyre-bird (M. ALBERTI) ... ... ... | | * | | * | | | | |
| FRUIT-EATING PIGEONS AND DOVES | | | | | | | | |
| Swainson's Fruit-Pigeon, *Dove* (PTILINOPUS SWAINSONII *Gould*) ... ... | October, November, December to end of February. | * | * | * | | | | |
| Ewing's Fruit-Pigeon, *Dove* (P. EWINGII *Gould*) ... | | | * | | | | | |
| Superb Fruit-Pigeon, *Dove* (P. SUPERBUS) ... ... | | *? | * | * | | | | |
| Magnificent Fruit-Pigeon (MEGALOPREPIA MAGNIFICA) | | * | | * | | | | |
| The North Australian, *var. of same* (M. MAGNIFICA *var.* ASSIMILIS.) ... ... | | | * | * | | | | |
| White-headed Fruit-Pigeon (LEUCOMELÆNA NORFOLCIENSIS) ... ... ... | | * | * | * | | | | |
| Torres Straits Fruit-Pigeon (MYRISTICIVORA SPILORRHOA) | Nov. to Jan. | | * | * | | | | |

## LIST OF AUSTRALIAN GAME BIRDS, &c.
## (*Continued*).

| Local or Vulgar and Scientific Name. | Months of Breeding. | Distribution of Species. | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | N. S. W. | N. Aust. | Queensland | Victoria. | S. Aust. | Tasmania. | West Aust. |
| THE CROWNED, OR "TOP-KNOT" PIGEON. | | | | | | | | |
| Flock Pigeon, &c. (LOPHOLAIMUS ANTARCTICUS) ... | October and November to January. | * | * | * | | | | |
| GROUND PIGEONS AND DOVES. | | | | | | | | |
| Green-backed Ground Dove (CHALCOPHAPS CHRYSOCLORA) ... ... ... | Oct., Nov., Dec., to end of Jan. | * | * | * | | | | |
| Northern var. of same species (CHA. LONGIROSTRIS *Gould*) | | | * | *? | | | | |
| The Wonga-wonga Pigeon (LEUCOSARCIA PICATA) ... | | * | *? | * | * | | | |
| BRONZE-WINGED PIGEONS, ETC. | | | | | | | | |
| Bronze-winged Pigeon, the Common Bronzewing, &c., (PHAPS CHALCOPTERA) ... | Aug., Sept., Oct., to end of Dec. | * | * | * | * | * | * | * |
| Elegant Bronzewing, Scrub Bronzewing, &c. (PH. ELEGANS) ... ... ... | July, August to December | * | | * | * | * | * | * |
| The Harlequin Bronzewing (PHAPS HISTRIONICA) ... | November to Jan. and Feb. | * | * | * | * | * | | |
| The Partridge Bronzewing (GEOPHAPS SCRIPTA) ... | November to end of Jan. | * | *? | * | * | | | |
| Smith's Bronzewing (GEOPHAPS SMITHII) ... ... | Aug. to Nov. | | * | * | | | | |
| Plumed Bronzewing (LOPHOPHAPS PLUMIEERA) ... | Probably during July, Aug. & Sept. | | * | * | * | * | | |
| Rust-colored Plumed Bronzewing (LOPH. FERRUGINEA) | July, August September. | | | | | | | * |

## LIST OF AUSTRALIAN GAME BIRDS, &c.

(*Continued.*)

| Local or Vulgar and Scientific Name. | Months of Breeding. | Distribution of Species. | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | N. S. W. | N. Aust. | Queensland | Victoria | S. Aust. | Tasmania. | West Aust. |
| The Crested Bronzewing (OXYPHAPS LOPHOTES) ... | Nov., Dec., and Jan. | * | * | * | * | * | | |
| White-quilled Bronzewing Rock Bronzewing, *var.* (PETROPHASSA ALBIPENNIS) | Probably from Aug. to Dec. | | * | * | * | | | |
| GROUND DOVES. | | | | | | | | |
| Barred-shouldered Dove (GEOPELIA HUMERALIS *Gould*) | July, Aug., Sept. and Oct | * | * | * | * | | | |
| The Peaceful Dove (GEOPELIA TRANQUILLA *Gould*) ... | July, Aug., to end of Oct. | * | * | * | * | * | | |
| The Placid Dove (GEOPELIA PLACIDA) ... ... ... | | | * | * | | | | |
| The Little Turtle Dove (GEOPELIA CUNEATA) ... ... | | * | * | * | * | * | | * |
| Large-tailed Scrub Pigeon (MACROPGGIA PHASIANELLA) | Oct., Nov., to end of Dec. | * | * | * | * | | | |
| MOUND RAISING BIRDS. | | | | | | | | |
| The Wattled Talegalla or Brush Turkey (TALEGALLUS LATHAMI) ... ... | Sept. to Jan. | * | * | * | * | | | |
| The Mallee Hen (Leipoa), (LEIPOA OCCELLATA) ... | Oct. to Feb. | * | | | * | * | | * |
| Australian Megapode (MEGAPODIUS TUMULUS) ... | Oct., Nov., to end of Feb. | | * | * | | | | |
| TURNICES, QUAIL, &C., AND ALLIED GENERA. | | | | | | | | |
| The Black-breasted Turnix (TURNIX MELANOGASTER *Gould*) ... ... ... | Sept. to Feb. | * | | * | | | | |

## LIST OF AUSTRALIAN GAME BIRDS, &c.
*(Continued.)*

| Local or Vulgar and Scientific Name. | Months of Breeding. | Distribution of Species. | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | N. S. W. | N. Aust. | Queensland | Victoria. | S. Aust. | Tasmania. | West Aust. |
| The Varied Turnix Painted Quail (TURNIX VARIUS) ... | Sept. to end of Jan. | * | | * | * | * | * | * |
| The Speckled Turnix (TURNIX SCINTILLANS, *Gould*)... | Probably during Oct. to end of Jan. | | | | | | | * |
| The Black-backed Turnix (TURNIX MELANOTUS) ... | Probably from Oct. to end of Jan. | * | *? | * | | | | |
| The Chestnut-backed Turnix (TURNIX CASTANOTUS, *Gould*) ... ... ... | Oct. to end of Feb. | | * | * | | | | |
| The Swift-flying Hemipode (TURNIX (*Hemipodius*) VELOX, *Gould*) ... ... | Sept., Oct., to Dec. | * | * | * | * | * | | |
| The Red-chested Hemipode (TURNIX (*Hemipodius*) PYRRHOTHORAX) ... ... | Sept., Oct., to end of Dec. | * | * | *? | * | * | | |
| The Collared Plain Wanderer (PEDIONOMUS TORQUATUS) | Sept. to Feb. | * | | | * | * | | |
| PERDICES, TRUE QUAILS, AND ALLIED SPECIES. | | | | | | | | |
| The Pectoral Quail, Stubble Quail, &c. (COTURNIX PECTORALIS, *Gould*) ... ... | Sept. to end of Jan. | * | | * | * | * | * | * |
| The Swamp Quail, Brown Quail, Garden Quail &c. (SYNOICUS AUSTRALIS) ... | Oct. to Feb. | * | | * | * | * | * | * |
| The Tasmanian Swamp Quail (SYNOICUS DIEMENENSIS, *Gould*) ... ... ... | Oct to Feb. | | | | | | * | |

## List of Australian Game Birds, &c.
(*Continued.*)

| Local or Vulgar and Scientific Name. | Months of Breeding. | Distribution of Species. | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | N. S. W. | N. Aust. | Queensland | Victoria. | S. Aust. | Tasmania. | West Aust. |
| Sombre Swamp Quail (SYNOICUS SORDIDUS, *Gould*) ... | Probably from Oct. to Feb. | | | | | * | | |
| The Northern Swamp Quail (SYNOICUS CERVINUS) ... | Probably from Oct. to Feb. | | * | * | | | | |
| The Least Swamp Quail, King Quail, Chinese Quail, &c. (SYNOICUS (*Excalfatoria*) SINENSIS, *Gould*) ... | Oct. to end of Feb. | * | * | * | * | * | | |
| GRALLATORES. | | | | | | | | |
| The Emu (DROMAIUS NOVÆ-HOLLANDIÆ) ... ... | June, July, to Sept. | * | * | * | * | * | * | |
| The Speckled or Spotted Emu (DROMAIUS IRRORATUS, *Bartl.*) ... ... | July to Sept. | | | | | | | * |
| The Australian Cassowary (CASUARIUS AUSTRALIS, *Wall*) ... ... ... | July, Aug., and Sept. | * | * | | | | | |
| The Australian Bustard or Plain Turkey (EUPODOTIS (*Otis*) AUSTRALIS) ... | Aug. to end of Nov. | * | * | * | * | * | | |
| PLOVERS AND ALLIED GENERA. | | | | | | | | |
| The Australian Stone Plover, Land Curlew, &c. (ŒDICNEMUS GRALLARIUS) ... | Sept. to end of Dec. | * | * | * | * | * | | * |

## List of Australian Game Birds, &c.
(*Continued.*)

| Local or Vulgar and Scientific Name. | Months of Breeding. | Distribution of Species. | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | N. S. W. | N. Aust. | Queensland | Victoria. | S. Aust. | Tasmania. | West Aust. |
| The Thick-knee, Large-billed Shore Plover, &c. (ESACUS MAGNIROSTRIS) ... ... | Probably during Sept. to Nov. | | * | * | | | | |
| The White-breasted Oyster-catcher (HŒMATOPUS LONGIROSTRIS, *Vicill.*) ... | Sept. to end of Dec. | * | * | * | * | * | * | * |
| The Sooty Oyster-Catcher (HÆMATOPUS FULIGINOSUS. *Gould*) ... ... ... | Sept. to end of Dec. | * | * | * | * | * | * | * |
| The Spur-winged Plover (LOBIVANELLUS LOBATUS)... | Sept. to end of Jan. | * | * | * | * | * | | |
| The Masked Spur-wing Plover "Wattled Plover," &c. (LOBIVANELLUS PERSONATUS) | Aug., Sept., and Oct. | | * | | | | | |
| The Black-breasted Plover (SARCIOPHORUS PECTORALIS) | Sept. to end of Jan. | * | | | * | * | * | |
| The Grey Plover (CHARADRIUS (*Squatarola*) HELVETICA)... | Not known to breed in Australia. | * | * | * | * | * | * | * |
| The Golden Plover (CHARADRIUS LONGIPES) ... ... | Not yet found breeding in Australia. | * | * | * | * | * | * | * |
| The Australian Dotterel (EUDROMIAS AUSTRALIS)... | Probably during Sept.; not known. | * | | * | * | | | |
| The Asiatic (?) Dotterel (EUDROMIAS VEREDUS) ... | Not known to breed in Australia. | | * | | | | | |
| The Ring-Dotterel (ÆGIALITIS HIATICULA) ... ... | Not found breeding in Australia. | * | | | | | | |

## LIST OF AUSTRALIAN GAME BIRDS, &c.
*(Continued.)*

| Local or Vulgar and Scientific Name. | Months of Breeding. | Distribution of Species. | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | N. S. W. | N. Aust. | Queensland | Victoria. | S. Aust. | Tasmania. | West Aust. |
| The Hooded Dotterel (ÆGIALITIS MONARCHA) ... | Oct. to end of Dec. | * | | * | * | * | * | * |
| The Black-breasted Dotterel (ÆGIALITIS NIGRIFRONS)... | Oct. to end of Dec. | * | * | * | * | * | | |
| The Red-capped Dotterel (ÆGIALITIS RUFICAPILLUS) | Oct. to Jan. | * | * | * | * | * | * | * |
| The Allied Dotterel (ÆGIALITIS INORNATUS) ... | Not known; probably Oct. to Jan. | * | * | * | * | * | * | * |
| The Double-banded Dotterel (ÆGIALITIS BICINCTUS) ... | Not known probably Oct. to Jan. | * | | * | * | * | | * |
| The "Banded Red-knee," Red-kneed Dotterel (ERYTHROGONYS CINCTUS, *Gould*) | Sept. Oct. to end of Dec. | * | | * | * | * | | |
| Bartram's Sandpiper (Actiturus bartramius) ... | Not known to breed in Australia. | * | | | | | | |
| The Australian Pratincole (Glareola grallaria, *Temm.*) | Not known to breed in Australia. | * | * | * | | | | |
| The Oriental Pratincole (Glareola Orientalis) ... | Not known to breed in Australia. | | * | | | | | |
| The White-headed Stilt (HIMANTOPUS LEUCOCEPHALUS, *Gould*) ... ... | September to December. | * | * | * | * | * | | * |
| The Banded Stilt (CLADORHYNCHUS PECTORALIS, *Gould*) | Probably from Sept. to Dec.; not yet found breeding | *? | | | * | * | | * |

## LIST OF AUSTRALIAN GAME BIRDS, &c.
## (*Continued.*)

| Local or Vulgar and Scientific Name. | Months of Breeding. | Distribution of Species. N. S. W. | N. Aust. | Queensland | Victoria. | S. Aust. | Tasmania. | West Aust. |
|---|---|---|---|---|---|---|---|---|
| The Red-necked Avocet (RECURVIROSTRA RUBRICOLLIS, *Temm.*) ... ... ... | Probably from Sept. to Dec.; not yet found breeding | * | * | * | * | * | * | * |
| The Black-tailed Godwit (Limosa melanuroides, *Gould*) | No authentic information on record respecting the breeding of these species in Australia; they probably breed during Oct. to Dec.; or perhaps as late as Jan. to beginning of Feb. to the North. |  | * |  |  |  |  |  |
| The Barred-rumped Godwit (Limosa uropygialis) ... |  | * | * | * | * | * | * | * |
| The Marsh Tringa (Tringa accuminata, *Horsf.*) ... |  | * | * | * | * | * | * | * |
| The Knot (Tringa canutus, L.) |  |  |  | * |  |  |  |  |
| The Great Sandpiper (Tringa tenuirostris, *Horsf.*) ... |  |  | * |  |  |  | *? | * |
| The Little Sandpiper (Tringa (*Actodromus*) Australis, *Cuv.*) |  | * | * | * | * | * | * | * |
| The Curlew Sandpiper (Tringa (*Schœniclus*) subarquata, *Güld.*) ... ... ... |  | * | * | * | * | * | * | * |
| The Terek Sandpiper (Terekia cinerea) ... ... |  | * |  |  |  |  |  |  |
| The Common Sandpiper, Tringoides hypoleucus L. (*Actitis empusa, Gould*) ... | No information on record respecting the breeding season of these birds in Australia; they probably breed during the months of Dec., Jan. and Feb. | * | * | * | * | * | * | * |
| The Green Shank (Glottis glottoides, *Gould*) ... |  | * | * | * | * | * | * | * |
| The Marsh Sandpiper (Totanus stagnatilis, *Temm*)... |  | * |  |  |  |  |  |  |
| The Grey-rumped Sandpiper (Totanus brevipes, *Cuv.*).. |  |  | * |  |  |  |  |  |
| The Turnstone (Cinclus (*Strepsilas*) interpres) ... |  | * | * | * | * | * | * | * |

## LIST OF AUSTRALIAN GAME BIRDS, &c.
(*Continued.*)

| Local or Vulgar and Scientific Name. | Months of Breeding. | Distribution of Species. | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | N. S. W. | N. Aust. | Queensland | Victoria | S. Aust. | Tasmania. | West Aust. |
| The Australian Snipe (GALLINAGO AUSTRALIS) ... | Does not breed in N.S.W., said to breed in S. Aust. during Jan. and Feb. | * | * | * | * | * | * | * |
| The Painted Snipe (RHYNCHŒA AUSTRALIS) ... ... | No record of their breeding in N.S.W.; said to breed in S. Aust. during Jan. and Feb. | * | * | * | * | * | | * |
| The Australian Curlew, Long-billed Whimbrel, &c. (NUMENIUS CYANOPUS) ... | | * | * | * | * | * | * | * |
| The Australian Whimbrel (NUMENIUS UROPYGIALIS, *Gould*) ... ... ... | | * | * | * | * | * | * | * |
| The Little Whimbrel (NUMENIUS MINOR, *Schl.*) ... | | * | * | * | * | | | * |
| The Straw-necked Ibis (GERONTICUS SPINICOLLIS) ... | No records of these species breeding in Australia; they will probably be found to breed during the months Nov., Dec., to end of Jan. | * | * | * | * | | | |
| The White Ibis (IBIS) *Threskiornis*, STRICTIPENNIS) ... | | * | * | * | * | | | |
| The Glossy Ibis (IBIS, (*Falcinellus*) IGNEUS) ... ... | | * | * | * | * | * | | |
| The Royal Spoonbill (Platalea regia) *Gould* ... ... | | * | * | * | * | | | |
| The Yellow-legged Spoonbill (PLATALEA FLAVIPES, *Gould*) | | * | * | * | * | | | |
| GRUIDÆ, TRUE CRANES. | | | | | | | | |
| The Australian Crane, Native Companion, &c. (GRUS AUSTRALASIANUS, *Gould*) ... | Oct. to end of Jan. | * | * | * | * | * | | |

## LIST OF AUSTRALIAN GAME BIRDS, &c.
(*Continued.*)

| Local or Vulgar and Scientific Name. | Months of Breeding. | Distribution of Species. | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | N. S. W. | N. Aust. | Queensland | Victoria. | S. Aust. | Tasmania. | West Aust. |
| CYCONIDÆ, STORKS, ETC. | | | | | | | | |
| The Jabiru, Gigantic Crane, &c. (XENORHYNCHUS AUSTRALIS ... ... ... | Sept., Oct. to Jan. | * | * | * | * | * | | |
| ARDEIDÆ, HERONS, ETC. | | | | | | | | |
| The Common Heron (ARDEA CINEREA, *Linn.*) ... ... | | * | | * | | * | | |
| The Great-billed Heron (ARDEA SUMATRANA, *Raffles*) | Sept., Oct. to end of Feb. | * | * | * | | | | |
| The Pacific Heron (ARDEA PACIFICA, *Lath.*)... ... | Sept., Oct., to end of Feb. | * | * | * | * | * | * | * |
| The White-fronted Heron, *Blue Crane*, &c. (ARDEA NOVÆ-HOLLANDIÆ) ... | Sept. to Dec. | * | | * | * | * | * | * |
| The Australian Egret, Large White Crane (HERODIAS ALBA, *Linn.*) ... ... | No reliable information on record respecting the time of breeding of these species; but they probably breed during Oct., Nov., Dec., and Jan. | * | * | * | * | * | * | * |
| The Plumed Egret, Smaller White Crane, &c. (HERODIAS EGRETTOIDES) ... | | * | * | * | * | * | | |
| The Spotless Egret (HERODIAS MELANOPUS) ... | | * | * | * | * | * | | * |
| The Little Egret (HERODIAS GARZETTA) ... ... | | | * | * | | | | |
| The Sombre Egret (HERODIAS ASHA) ... ... ... | | * | * | * | * | * | | |

## LIST OF AUSTRALIAN GAME BIRDS, &c.
(*Continued.*)

| Local or Vulgar and Scientific Name. | Months of Breeding. | Distribution of Species. | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | N. S. W. | N. Aust. | Queensland | Victoria. | S. Aust. | Tasmania. | West Aust. |
| The Pied Egret (HERODIAS PICATA) ... ... ... | No reliable information on record respecting the breeding time of these species; they probably breed during Oct., Nov., Dec., and Jan. | | * | | | | | |
| The Blue Reef-Heron, White Reef Heron, Grey's Reef Heron, &c. (HERODIAS SACRA) ... ... ... | | * | * | * | * | * | | * |
| The Nankeen Night Heron (NYCTICORAX CALEDONICUS) | Oct. to Jan. | * | * | * | * | * | | * |
| BITTERNS AND ALLIED GENERA. | | | | | | | | |
| The Australian Bittern (BOTAURUS AUSTRALIS) *Gould* | Breeding months not known; probably from Oct. to Dec. | * | | * | * | * | * | * |
| The Yellow-necked Mangrove Bittern (BUTOROIDES FLAVICOLLIS) ... ... ... | Oct. to Jan. | * | * | * | * | * | | * |
| The Thick-billed Mangrove Bittern (BUTOROIDES MACRORHYNCHA) ... ... | Sept. to Jan. | * | * | * | | | | |
| The Little Mangrove Bittern (BUTOROIDES JAVANICA)... | Oct. to Jan. | | * | * | | | | |
| Minute Bittern, Reed Bittern, &c. (ARDETTA PUSILLA) ... | Breeding months not known; probably from Oct. to Dec. | * | | * | * | | | |
| RAILS, WATER HENS, AND ALLIES. | | | | | | | | |
| The Black-backed Porphyrio, Red-bill, &c. (PORPHYRIO MELANOTUS) ... ... | Aug. to end of Nov. | * | * | * | * | * | * | |

## LIST OF AUSTRALIAN GAME BIRDS, &c.
(*Continued.*)

| Local or Vulgar and Scientific Name. | Months of Breeding. | Distribution of Species. | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | N. S. W. | N. Aust. | Queensland | Victoria. | S. Aust. | Tasmania. | West Aust |
| The Azure-breasted Porphyrio, West Australian Red-bill (PORPHYRIO BELLUS)... | Aug. to end of Nov. | | | | | | | * |
| MORTIER'S TRIBONYX. | | | | | | | | |
| Native Hen, Swamp Hen, &c. (TRIBONYX MORTIERI, *Du Bus.*) ... ... ... | Oct., Nov., and Dec. | | | | | | | * |
| The Black-tailed Tribonyx, Moor Hen, Swamp Hen, &c. (TRIBONYX VENTRALIS) | Oct., Nov., and Dec. | * | | * | * | * | | * |
| The Sombre Gallinule, Water Hen, &c. (GALLINULA TENEBROSA) ... ... ... | Sept., Oct., and Dec. | | | | | | | |
| The Rufous-vented Gallinule (GALLINULA RUFICRISSA)... | | | * | | | | | |
| The Australian Coot, White-billed Water Hen, &c. (FULICA AUSTRALIS) ... | Sept., Oct., and Dec. | * | | | | | | |
| The Pectoral Rail, Land Rail (RALLUS, (*Hypotænidia*) PHILIPPENSIS) ... | Sept., Oct., Nov. & Dec. | * | * | * | * | * | *? | * |
| Lewin's Rail, Water Rail, (RALLUS BRACHIPUS, *Swains*) | Oct to Dec. | * | | * | * | * | * | * |
| The Chestnut-bellied Rail, EULABEORNIS CASTANEIVENTRIS, *Gould*) ... ... | No record—probably Oct. to Dec. | | * | *? | | | | |
| The Spotted Water Crake, (PORZANA FLUMINEA) ... | Sept. to Dec. | * | * | * | * | * | * | |
| The Little Water Crake, (PORZANA PALUSTRIS) ... | Sept. to Dec. | * | * | * | * | * | * | |

## LIST OF AUSTRALIAN GAME BIRDS, &c.
(*Continued.*)

| Local or Vulgar and Scientific Name. | Months of Breeding. | Distribution of Species. | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | N. S. W. | N. Aust. | Queensland | Victoria. | S. Aust. | Tasmania. | West Aust. |
| The Tabuan Water Crake, Spotless Water Rail, &c., (PORZANA TABUENSIS) ... | Sept. to Dec. | * | * | * | * | * | * | * |
| The White-eye-browed Water (Crake, (PORZANA, (*Erythra*) QUADRISTRIGATA) ... ... | Oct. to Dec. | | * | * | | | | |
| NATATORES; ANATIDÆ, DUCKS, GEESE, &c., AND THEIR ALLIES. | | | | | | | | |
| The Black Swan, (CYGNUS, (*Chenopis*) ATRATUS) ... | Oct. to end of Jan. | * | | * | * | * | * | * |
| Cereopsis Goose, Cape Barren Goose, &c. (CEREOPSIS NOVÆ-HOLLANDIÆ) ... | July to Oct. | * | | | * | * | * | |
| The Maned Goose, Wood Duck, &c., (CHLAMYDOCHEN JUBATA) ... ... ... | Sept., Oct., to end of Dec. | * | | * | * | * | | * |
| The semi-palmated Goose, Black and white Goose, Pied Goose, &c., (ANSERANAS MELANOLEUCA) ... | Oct. to end of Jan. | * | * | * | * | * | | |
| The Green-backed Pigmy Goose, Little Goose, &c., (NETTAPUS PULCHELLUS, *Gould*) .. ... ... | | | * | * | | | | |
| The White-quilled Pygmy Goose, (Nettapus albipennis, *Gould*) ... ... | Dec. & Jan. | * | * | * | | | | |
| The Radjah Shieldrake, White-headed Wood Duck, &c. (TADORNA RADJAH, *Eyton*) | Oct., Nov. to end of Dec. | | * | * | *? | | | |

## LIST OF AUSTRALIAN GAME BIRDS, &c.
(*Continued.*)

| Local or Vulgar and Scientific Name. | Months of Breeding. | Distribution of Species. | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | N. S. W. | N. Aust. | Queensland | Victoria. | S. Aust. | Tasmania. | West Aust. |
| The Chestnut-colored Shieldrake, New-Holland Shieldrake, Great White-winged Duck, Mountain Duck, &c. (CASARCA TADORNOIDES, *Eyton*) ... ... ... | Oct. Nov. and Dec. | * | | *? | * | * | * | * |
| The Australian Wild Duck, Black Duck, Grey Duck, &c., (ANAS SUPERCILIOSA, *Gmel.*) ... ... ... | July, Aug. to end of Dec. | * | * | * | * | * | * | * |
| Australian Teal (ANAS PUNCTATA, *Cuv.*) ... ... | Sept. to end of Dec. | * | *? | * | * | * | * | * |
| The Freckled Duck (ANAS NÆVOSA) ... ... ... | No records; probably during Oct. to end of Dec. | | | | | | | * |
| The Australian Shoveller, Blue-winged Shoveller, &c. (SPATULA RHYNCHOTIS, *Lath.*) | Oct. to end of Jan. | | | | * | * | | |
| Pink-eyed Duck, Zebra Duck, Little Shoveller, Whistling Duck, (MALACORHYNCHUS MEMBRANACEUS) ... ... | Oct. to end of Jan. | * | | * | * | * | * | * |
| The Whistling Wood Duck (DENDROCYGNA VAGANS)... | Nov. and Dec. to March. | * | | * | * | * | * | * |
| Eyton's Wood Duck (LEPTOTARSIS (*Dendrocygna*) EYTONI) | No records of time of breeding; probably from Nov. to March. | * | * | * | | | | |
| White-eyed Duck, White-winged Duck, Brown Duck &c. (NYROCA AUSTRALIS) | No record of the time of breeding. | * | * | * | * | * | * | * |

## LIST OF AUSTRALIAN GAME BIRDS, &c.

*(Continued.)*

| Local or Vulgar and Scientific Name. | Months of Breeding. | Distribution of Species. | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | N. S. W. | N. Aust. | Queensland | Victoria. | S. Aust. | Tasmania. | West Aust. |
| Blue-billed Duck (ERISMATURA AUSTRALIS, *Eyton*)... | Sept. to end November. | | | | * | * | | * |
| The Musk Duck (Biziura lobata) ... ... ... | Sept. to end of Jan. | * | | * | * | * | * | * |

The Latin names of those birds not considered as "Game" in Australia are in ordinary type; those of the "Game Birds" in small capitals.

ADDENDA, including certain Birds worthy of protection on account of their beauty and rarity, and which, without protection, would soon become extinct.

| Local or Vulgar and Scientific Name. | Months of Breeding. | N. S. W. | N. Aust. | Queensland | Victoria. | S. Aust. | Tasmania. | West Aust. |
|---|---|---|---|---|---|---|---|---|
| The White-bellied Plumed Bronzewing (LOPHOPHAPS LENCOGASTER, *Gould*) ... | No records | | | | * | * | | |
| The Red-necked Rail, Red Scrub Rail, &c. (RALLINA TRICOLOR)... ... ... | Sept. to Dec. | | * | * | | | | |
| The Grass Parrot (PEZOPORUS FORMOSUS) ... ... | Oct. to Jan. | * | | | * | * | | |
| The Night Parrot (GEOPSITTACUS OCCIDENTALIS) ... | No records | | | | * | * | | * |
| The Common Shore Gull (Larus (*Xema*) Jamesonii) | Oct., Nov., and Dec. | * | * | * | * | * | * | * |
| The Great White-bellied Sea Eagle (HALIAETUS leucogaster) ... ... ... | Sept. to end of Jan. | * | * | * | * | * | * | * |
| The Pelican (Pelicanus conspicillatus, *Temm.*) ... | Nov. to end of Feb. | * | * | * | * | * | * | * |

Mr. E. P. Ramsay, the Curator of the Australian Museum, exhibited a skin of a supposed new species of *Poephila*, a very beautiful species of finch from the table-lands some 60 miles inland from Rockingham Bay, North-East Australia, and made the following remarks :—

"This bird, although closely allied to *Poephila gouldiæ* (*Gould*), might be considered a distinct species, on account of the differences in the tint of coloring which pervades the pectoral band, the color of the under tail-coverts, and the lengthened form of the centre two tail feathers. If *Poephila gouldiæ* and *P. mirabilis* (*Homb. and Jacq.*) be really distinct species as stated by Mr. Gould, then the present bird must be looked upon as a third, closely allied, and intermediate species ; but if otherwise, then this will probably prove to be identical with *P. gouldiæ*, and that species to be the female of *P. mirabilis*, as originally stated by Messrs. Hombron and Jacquinot (*Homb. and Jacq. Voy. au Pôle Sud.*) The lengthened tail feathers, and *narrow line of blue feathers* which surrounds the black face and throat of the present specimen, and its bluish upper tail-coverts, lead me to this conclusion. Without a careful examination of a good series of specimens, of both sexes, in various stages of plumage from the young to the adult, the matter must remain an open question, as the present bird shows characters already recorded, noticeable in both *Poephila gouldiæ* and *P. mirabilis*. If, however, Mr. Gould be correct in separating them, then, as I remarked before, we have a third species intermediate between them, and which may be described as follows:—Plumage same as in *Poephila gouldiæ* (*Gould*), but having the black of the throat and face extending conspicuously *beyond and round the eye*, and over the *whole of the earcoverts, bounded by a narrow line of blue apparently all round** ; across the chest a band of buff-tinted feathers margined with *rosy lilac* or *light lilac-purple*, which almost obscures the buffy tinge ; under tail-coverts *white* ; upper tail-coverts greenish blue, the outer series blue : tail black, the centre two feathers elongated, tapering, pointed, extending 0·6 in. beyond the remainder; bill bluish white at base, tip, and the lower mandible red; legs yellow. Total length to tip of *lateral* tail feathers, 4 in.; wing 2·6 in.; tarsus, 0·6; bill, 0·45; tail, 1·3, to tip of centre feathers, 1·9. All the upper surface is green; and the wing-quills brown as in *P. gouldiæ.*

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* Skin mutilated behind the ear-coverts ; the blue line plainly visible on the crown of the head, behind the eye, and on the throat.

*Hab.* North-east Australia.

"I shall not propose any new name at present for this bird, as I am by no means sure that it and *P. gouldiæ* may not hereafter prove to be females of *P. mirabilis.*

"I append short descriptions of *Poephila gouldiæ* and *P. mirabilis* for the benefit of our friends in the country, especially those who may be living in the districts frequented by these lovely birds, that they may be enabled to distinguish them at once; and would direct their attention to the above remarks, hoping that some liberal-minded person, willing to aid science, may be induced to procure and forward specimens to the Museum,† and thereby greatly assist in clearing up any doubts which may exist respecting the validity of the species, and add to our Museum one more species new to the already large collection of Australian birds exhibited there.

"I am indebted to Mr. W. G. Armit, of Queensland, for this specimen:—

POEPHILA GOULDIÆ, *Gould.*

*Amadina gouldiæ, (Gould),* Bds. Aust., fol. vol. 3, pl. 88; *id.* Handbook Bds. Aust., vol. 1, p. 420.

*Poephila mirabilis, (female), Homb. et Jacq. Voy. au Pôle Sud.*

" All the upper surface of the body green; quills of the wings brown; tail black; head, and front and sides of the throat black, bounded by a narrow line of verditer-green; across the breast a broad band of lilac-purple, all the under surface shining wax-yellow; bill, red flesh color at the base.

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† Instructions for preserving specimens of Natural History may be obtained from Mr. E. P. Ramsay, the Curator at the Australian Museum.

"Total length, 3¾ in. ; bill, ⅜ in. ; wing, 2½ in. ; tail, 2½ ; tarsi, ⅝ in. *Gould, Handbook Bds. Aust.* 1, *p.* 421.

POEPHILA MIRABILIS, *Homb. et Jacq.*

"Crown of the head and cheeks of a beautiful carmine, bounded posteriorly with a narrow line of black ; throat black, to this succeeds a band of pale blue narrow on the throat, and broad on the back of the neck ; back and wings green, passing into yellow on the nape of the neck ; breast crossed by a broad band of lilac, separated from the yellow of the abdomen by a narrow line of orange ; rump and upper tail coverts pale blue ; quills brown ; tail black ; bill fleshy white, becoming redder at the tip ; feet, flesh-color."

Mr. Gould figures this species with tail feathers at least 2½ in. in length ; but gives no measurements in the text. Length, about 6 inches.

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## MONDAY, 31st JULY, 1876.

WILLIAM MACLEAY, ESQ., President, in the Chair.

THE following Donations were announced :—

The Shells of Tasmania, by the Author—the Rev. J. E. TENISON WOODS, F.L.S., F.G.S.

Hints for the Preservation of Specimens of Natural History—by E. PIERSON RAMSAY, F.L.S., Curator Australian Museum.

The Secretary announced that the Rev. J. E. TENISON WOODS, F.L.S., F.G.S., had been elected by the Council a Corresponding Member of the Society.

Mr. RAMSAY exhibited a male and female specimen of the very rare and beautiful *Zylopsyche Staceyi*, Scott, from the neighbourhood of Newcastle.

The following papers were read :—

## Shells collected during the Chevert Expedition, by JOHN BRAZIER, C.M.Z.S.

### CLASS GASTEROPODA.

### SUB-FAMILY PURPURINÆ.

### 1.—PURPURA (THALESSA) MANCINELLA.

*Murex mancinella*, Linn. Gmel., p. 3538, No. 47.

*Purpura mancinella*, Lam., Anim. Sans Vert., tome 7, p. 239.

*Purpura mancinella*, Reeve, Conch. Icon., pl. 1, species 2.

*Hab.* Darnley Island, Torres Straits. Found on the reefs under blocks of coral at low water.

### 2.—PURPURA (THALESSA) ECHINATA.

*Purpura echinata*, De Blainville, Nouv. Ann. du Mus., pl. 11, f. 2.
„ „ Reeve, Conch. Icon., pl. 7, species 33.

*Hab.* Darnley Island, Torres Straits, found on the reefs under coral. Also found at Port Darwin (Mr. Bednall).

### 3.—PURPURA (THALESSA) HIPPOCASTANUM.

*Murex hippocastanum*, Linn. Gmel., p. 3559, No. 48.
*Purpura hippocastanum*, Lam., Anim. Sans Vert., tome 7, p. 238.
„ „ Reeve, Conch. Icon., pl. 8, species 34a.

*Hab.* Barnard Islands No. 3, North-East Australia; Darnley Island, Torres Straits. Specimens very small.

### 4.—PURPURA (CRONIA) AMYGDALA.

*Purpura amygdala*, Kiener, Icon. coq. 9, pl. 10, f. 26.
*Buccinum amygdala*, Reeve, Conch, Icon., pl. 8, species 60.

*Hab.* Home Islands, off Cape Grenville, North-East Australia; also Moreton Bay, Port Denison, Port Jackson and Port Darwin (Brazier).

### 5.—SISTRUM OCHROSTOMA.

*Ricinula ochrostoma*, De Blainville, Nouv. Ann. du Mus. p. 205.
„ „ Reeve, Conch. Icon., pl. 4, species 31.

*Hab.* Darnley Island, Torres Straits. Found in coral at low water.

### 6.—SISTRUM CONCATENATUS.

*Murex concatenatus*, Lister, t. 954, f. 5.
„ „ Lam. Anim. Sans Vert., tome 7, p. 176.
*Ricinula concatenata*, Reeve, Conch. Icon., pl. 3, species 18a. 18b.

*Hab.* Warrior Reef and Dungeness Island, Torres Straits. Found at low water under broken coral.

### 7.—SISTRUM MURICATUS.

*Ricinula muricata*, Reeve, Conch. Icon., pl 5, species 39.

*Hab.* Home Islands off Cape Grenville, North-East Australia. Found on the reef at low water.

### 8.—SISTRUM ANAXARES.

*Purpura Anaxares*, Duclos, Kiener, Icon. Coq., Viv. p. 26, pl. 7, f. 17.

,, ,, Reeve, Conch. Icon., pl. 12, species 61.

*Hab.* Home Islands, off Cape Grenville, North-East Australia; Darnley Island, Torres Straits. Found under stones and coral on the reefs at low water. Also found by me at Port Makera, San Christoval, Solomon Islands.

### 9.—SISTRUM MARGINALBUM.

*Ricinula marginalba*, De Blainville, Nouv. Ann. du Mus.

*Hab.* Barrow Island, North-East Australia, found under stones.

Reeve and other authors appear to connect this species with *Sistrum tuberculatum*, De Blanville, from which, however, it is quite distinct. It is a common Polynesian shell.

### 10.—CORALLIOPHILA SQUAMULOSUS.

*Purpura squamulosus*, Reeve, Conch. Icon., pl. 12, species 68.

*Hab.* Darnley Island, Torres Straits. One splendid specimen found in a block of coral at low water.

## SUB-FAMILY RAPANINÆ.

### 11.—RAPA PAPYRACEA.

*Bulla rapa*, Linn. Syst. Nat. (12th edit.) p. 1184.

*Pyrula papyracea*, Lam. Anim. Sans Vert., tome 7, p. 144.

*Rapa tenuis*, Martini, Conch., 3t. 68 f. 747, 749.

*Pyrula rapa*, Reeve, Conch. Icon., pl. 7, species 21.

*Rapa tenuis*, H. and A. Adams, Recent Moll., vol. 3, pl. 14, fig. 8.

,, *papyracea*, Chenu., Manuel de Conch. p. 173, fig. 857.

*Hab.* Darnley Island, Torres Straits. One very large specimen was obtained at the depth of 15 fathoms, on a rough bottom of coral and stones.

This genus was separated from Pyrula by Klein in 1753.

## FAM. DACTYLIDÆ.

### 12.—DACTYLUS (PORPHYRIA) VIRIDESCENS.

*Oliva viridiscens*, Martini.

,, *sanguinolenta*, Lam., Anim. Sans Vert., tome 7, p. 426.

*Oliva* Duclos, Olives, pl. 20, fig. 15, 16.

*Strephonia tricolor*, Gray, Proc. Zool., London, 1858, p. 42.

*Oliva viridiscens*, Marrat in Sowerby's Thes. Conch., vol. 4, p. 16, Oliva, pl 12, fig. 171.

*Hab.* Hall Sound, New Guinea. Found on the reef under stones at low water.

### 13.—DACTYLUS (PORPHYRIA) PORPHYRITICUS.

*Oliva porphyritica*, Martini.

„ *erythrostoma*, Lam., Anim. Sans Vert, tome 7, p. 419.

„ „ Duclos, Olives, pl. 13, fig. 4, 5.

„ „ Reeve, Conch. Icon., pl. 5, fig. 7.

*Strephona erythrostoma*, Gray, Proc. Zool. Soc., London, 1858, p. 42.

*Oliva (Ispidula) erythrostoma*, Chenu., Manuel de Conch., p. 177, fig. 877.

*Oliva porphyritica*, Marrat in Sowerby's Thes. Conch., vol. 4, p. 12, Oliva, pl. 7, fig. 105, 106.

*Hab.* Darnley Island, Torres Straits, found on sandy flats at half-tide.

### 14.—DACTYLUS (ISPIDULA) CŒRULENS.

*Oliva cœrulea*, Bolten.

„ *episcopalis*, Lam., Anim- Sans Vert., tome 7, p. 422.

„ „ Duclos, Olives, pl. 10, f. 11, 12.

*Strephonia episcopalis*, Gray, Proc. Zool. Soc., London, 1858, p. 42.

*Oliva cœrulea*, Marrat, in Sowerby's Thes. Conch., vol. 4, p. 8., Oliva, pl. 4, fig. 49, 50.

*Hab.* Darnley Island, Torres Straits. Found on sand beaches at half-tide.

### 15.—DACTYLUS (CYLINDRUS) TIGRINUS.

*Oliva tigrina*, Meuschen.

„ *tesellata*, Lam., Anim. Sans Vert, tome 7, p. 430.

„ „ Duclos, Olives, pl. 27, fig. 1, 4.

„ „ Reeve, Conch., Icon., pl. 20, fig. 53.

*Galeola tigrina*, Gray, Proc. Zool. Soc., London, 1858, p. 49.

*Oliva tigrina*, Marrat in Sowerby's Thes. Conch., vol. 4, p. 19, Oliva, pl. 15, fig. 222, 223, 224.

*Hab.* Darnley Island, Torres Straits. Found on the sands at the edge of low water; also at 5 fathoms sandy mud bottom.

### 16.—OLIVELLA CALDANIA.

*Oliva Caldania*, Duclos, Olives, pl. 6, fig. 3, 4.

*Olivina Caldania*, Gray, Proc. Zool. Soc., London, 1858, p. 52.

*Oliva Caldania*, Marrat in Sowerby's Thes. Conch., vol 4, p. 11, Oliva, pl. 6, fig. 97.

*Hab.* Mud Bay, Cape York, North Australia, 5, 11 fathoms; sandy mud bottom; Bet Island, Torres Straits, 11 fathoms, sandy bottom.

## FAM. FASCIOLARÜDÆ.

### 17.—PERISTERNIA AUSTRALIENSIS.

*Turbinella Australiensis*, Reeve, Conch. Icon., pl. 11, species 56.

*Hab.* Palm Island, North-East Australia. Found on the reefs under coral.

### 18.—LEUCOZONIA PICTA.

*Turbinella picta*, Reeve, Conch. Icon., pl. 4, species 19.

*Hab.* Katow, New Guinea. Found on sand beaches near the mouth of the river; one living specimen obtained.

## FAM. VOLUTIDÆ.

### 19.—CYMBIUM GEORGINÆ.

*Melo Georginœ*, Gray in Griffith's Cuvier's Animal Kingdom, 1833, pl. 34.

*Melo mucronatus*, Broderip in Sowerby, Species Conchyliorum, 1855, part 2, page 8.

*Melo mucronatus*, Sowerby, Thes. Conch., vol. 1, p. 415, pl. 83, fig. 23, 28.

„ „ „ „ vol. 3, p. 376, Thes. pl. 262, fig. 34.

*Cymbium Georginœ*, Gray, Proc. Zool. Soc., 1855, p. 54.

„ „ Reeve, Conch., Icon., pl. 11 sp. 6a., pl. 12., sp. 6b.

*Hab.* Darnley Island, Torres Straits, found in pools on the reefs at low water.

### 20.—CYMBIUM UMBILICATUM.

*Melo umbilicatus*, Broderip in Sowerby, Species Conchyliorum, 1855, part 2, p. 8.

*Melo umbilicatus*, Sowerby, Thes. Conch., vol. 1, p. 416, pl. 83, fig. 29, 30.

*Hab.* Low Island, Trinity Bay, North-East Australia; Darnley Island, Torres Straits.

### 21.—CYMBIUM DIADEMA.

*Voluta diadema*, Lam., Anim. Sans Vert., tome 7, p. 239.

*Melo Diadema*, Broderip in Sowerby, Species Conchyliorum, part 2, p. 5.

*Melo Diadema*, Sowerby, Thes. Conch., vol. 1, p. 414, pl. 82, fig. 16, 17.

*Cymbium Diadema*, Gray, Proc, Zool. Society, London, 1855, p. 54.

*Hab.* Darnley Island, Torres Straits.

This common species is found upon all reefs and sandbanks in the Straits; and is used by the Trepang and Pearl shell collectors for holding water.

### 22. —VOLUTELLA FLAVICANS.

*Voluta flavicans*, Gmelin, Syst. Nat. p. 3464.

,, *volvacea*, Lam., Anim. Sans Vert., tome 7, p. 346.

,, ,, Sowerby, Thes. Conch., vol. 1, p. 195, pl. 46, fig. 3, pl. 51, fig. 60.

,, *lugubris*, Swainson, Exotic Conchology, 1841, p. 20, pl. 40.

,, ,, Catlow and Reeve, Conchologists, Nomenclator, p. 307, sp. 61.

,, *flavicans*, Reeve, Conch, Icon., pl. 19, species 45b.

,, *modesta*, Wood, Suppl. Index, Test. 1828, p. 11, pl. 3, fig. 24.

,, *signifer*, Broderip, Proc. Zool. Soc., London, 1847, p. 232.

*Volutella valvacea*, Gray, Proc. Zool. Soc., London, 1866, p. 63.

*Voluta flavicans*, Crosse, French Journal de Conch., 1871, vol. 19, p. 296.

*Hab.* Katow, New Guinea. One fine specimen was found crawling on a sandy mud beach at the edge of low water (Brazier); Port Essington, North Australia (Mr. G. F. Angas).

### 23.—AULICA SOPHIA.

*Voluta Sophia*, Gray, Ann. and Mag. Nat. Hist., 1847.

" " " in Voyage H.M.S. Fly, vol. 2, p. 355, pl. 1, fig. 12.

" " Reeve, Conch. Icon., pl. 10, species 21.

*Volutella* " Gray, Proc. Zool. Soc., London, 1855, p. 63.

*Voluta* " Sowerby, Thes. Conch., vol. 3, p. 270, Voluta pl. 12, Thes. pl. 261, fig. 132.

*Voluta sophia* (Scapha) Angas, Proc. Zool. Soc., London, 1864.

" " Crosse, French Journal de Conch., 1871, vol. 19, p. 279.

*Hab.* Warrior Island, Torres Straits, found on a white sand beach at the edge of low water (Brazier); Darnley Island, Torres Straits, 30 fathoms, sandy mud bottom (Brazier); Endeavour Straits, North Australia, Mr. Jukes; Port Essington, by the late Mr. John Murphy, when in company with the Leichhardt expedition, specimen in collection of Dr. Cox.

### 24.—AULICA PULCHRA.

*Voluta pulchra*, Sowerby, Tank. Cat. App. p. 28, pl. 4, fig. 2.

" " " Thes. Conch., vol. 1, p. 199, pl. 51, fig. 61.

" " Catlow and Reeve, Conchologist, Nomenclator, p. 306, sp. 48.

" " Reeve, Conch. Icon., pl. 21, species 54a 54b.

" " Wood, Suppl. Index, Test. p. 10, pl. 3, fig. 6.

*Scapha pulchra*, Gray, Proc. Zool. Soc., London, 1855, p. 56.

*Voluta* " Chenu Manuel de Conch., p. 190, fig. 969.

" " (Scapha) Angas, Proc. Zool. Soc., London, 1864.

" " Crosse, French Journal de Conch., 1871, vol. 19, p. 278.

*Hab.* Darnley Island, Torres Straits, 30 fathoms, sandy mud bottom (Brazier); Heron Island, North-East Coast of Australia, the late Mr. John Macgillivray; Lady Elliott's Island, North-East Australia (Brazier).

### 25.—AULICA RUTILA.

*Voluta rutila*, Broderip, Zool. Journal, 1825, vol. 2, p. 30, pl. 3.

„ „ Sowerby, Thes. Conch. vol. 1, p. 200, pl. 46, fig. 5, 6.

„ „ Catlow and Reeve, Conchologists, Nomenclator. p. 306, sp. 52.

„ „ Reeve, Conch. Icon., pl. 4, fig. 8.

*Scapha rutila*, Gray, Proc. Zool. Soc., London, 1855, p. 56.

*Voluta rutila*, Chenu Manuel de Conch., p. 187, fig. 952.

„ „ (Scapha) Angas, Proc. Zool. Soc., London, 1864, p.

„ „ Crosse, French Journal de Conch, 1871, vol. 19, p. 279.

„ „ *aulica*, Kiener.

*Hab.* Darnley Island, Torres Straits, found at low water on the reefs, crawling in small pools (Brazier).

### 26.—SCAPHELLA MACULATA.

*Voluta maculata*, Swainson, Exotic, Conch., p. 23, pl. 38.

*Scaphella maculata* „ Malacology, p. 101, fig. 7b.

*Voluta* „ Sowerby, Thes. Conch., vol. 1, p. 196. pl. 53, fig. 85, 86.

„ „ Catlow and Reeve, Conchologists, Nomenclator, p. 307, sp. 31.

„ „ Reeve, Conch. Icon. pl. 13, fig. 30.

*Amoria maculata*, Gray, Proc. Zool. Soc., London, 1855, p. 64.

*Voluta* „ (Amoria) Angas, Zool. Soc., London, 1864.

„ „ Crosse, French Journal de Conch., 1871, vol. 19, p. 292.

*Hab.* Palm Island, North-East Australia. Found on sand flats inside the reefs at low water. The shells are generally occupied by a species of Pagurus, or Hermit Crab.

*Scaphella maculata* was found by me in 1871 at Port Curtis, Port Denison, and Fitzroy Island, North-East Australia. (Brazier).

## FAM. MITRIDÆ.

### 27.—MITRA EPISCOPALIS.

*Voluta episcopalis*, Linn. Gmel. p. 3459, No. 94.

*Mitra episcopalis*, Lam., Anim. Sans Vert, tome 7, p. 299.

„ „ Chenu. Manuel de Conch, p. 193, fig. 996.

„ „ Sowerby, Thes. Conch., vol. 4, Mitra pl. 1, fig. 3.

*Hab.* Darnley Island, Torres Straits. Found inside the reefs on the sands at half-tide; also under coral blocks on the reefs.

### 28.—MITRA CYLANDRACEA.

*Mitra cylandracea*, Reeve, Proc. Zool. Soc., London, 1844, p. 175.

„ „ „ Conch. Icon., pl. 13, species 97.

„ „ Sowerby, Thes. Conch. vol. 4, Mitra pl. 12, fig. 188.

*Hab.* Warrior Reef, Torres Straits, 8 fathoms, hard mud bottom. One specimen found.

### 29.—MITRA LUGUBRIS.

*Mitra lugubris*, Swainson, Zool. Illust.

„ „ Sowerby, Thes. Conch. vol. 4, Mitra pl. 12, fig. 201.

*Hab.* Darnley Island, Torres Straits, 10 fathoms, sandy bottom.

### 30.—NEBULARIA ADUSTA.

*Mitra adusta*, Lam., Anim. Sans Vert., tome 7, p. 303.

„ „ Sowerby, Thes. Conch., vol. 4, Mitra pl. 2, fig. 26.

*Hab.* Darnley Island, Torres Straits, found on the reef under coral.

### 31.—NEBULARIA SUTURATA.

*Mitra saturata*, Reeve, Proc. Zool. Soc., London, 1845, p. 54.

„ „ „ Conch. Icon. pl. 34, species 282.

„ „ Sowerby, Thes. Conch., vol. 4, Mitra pl. 16, fig. 585.

*Hab.* Darnley Island, Torres Straits, 10, 20, 30 fathoms.

### 32.—SCABRICOLA CRENIFERA.

*Mitra crenifera*, Lam. Anim. Sans Vert., tome 7, p. 306.
„ „ Sowerby, Thes. Conch. vol. 4, Mitra pl. 3, fig. 29, 30.

*Hab.* Darnley Island, Torres Straits. One specimen found at 30 fathoms, sandy mud bottom.

### 33.—SCARICOLA GRANATINA.

*Mitra granatina*, Lam. Anim. Sans Vert., tome 7, p. 306.
„ „ Sowerby, Thes. Conch. vol. 4, Mitra pl. 3, fig. 33, 34, 35.

*Hab.* Darnley Island, Torres Straits. One specimen found with *Scabricola crenifera.*

### 34.—CANCILLA DUPLILIRATA.

*Mitra duplilirata*, Reeve, Proc. Zool. Soc., London, 1845, p. 46.
„ „ „ Conch. Icon., pl. 29, species, 229.
„ „ Sowerby, Thes. Conch., vol. 4, Mitra pl. 25, fig. 555.

*Hab.* Princess Charlotte Bay, North-East Australia, 14 fathoms, sandy bottom; Darnley Island, Torres Straits, 30 fathoms, white sand bottom.

### 35.—CANCILLA FILARIS.

*Voluta filosa*, Born. Mus., t. 9, f. 9, 10.
*Mitra filosa*, Lam., Anim. Sans Vert., tome 7, p. 311.
„ „ Sowerby, Thes. Conch., vol. 4, Mitra, pl. 7, fig. 82, 83.

*Hab.* Darnley Island, Torres Straits, found on the reefs.

### 36.—CANCILLA CIRCULATA.

*Mitra circulata*, Kiener, Icon. Coq., pl. 5, fig. 13.
„ „ Sowerby, Thes. Conch., vol. 4, Mitra pl. 7, fig. 86, 87.

*Hab.* Darnley Island, Torres Straits, 5, 10, 15, 20, 30 fathoms; bottom, sand in places, also sandy mud.

### 37.—CANCILLA HEBES.

*Mitra hebes*, Reeve, Proc. Zool. Soc., London, 1845, p. 55.
„ „ „ Conch. Icon. pl. 35, species 292.
„ „ Sowerby, Thes. Conch., vol. 4, Mitra pl. 14, fig. 230.

*Hab.* Darnley Island, Torres Straits, 20, 30 fathoms, sandy mud bottom.

### 38.—CANCILLA INTERLIRATA.

*Mitra interlirata*, Reeve, Proc. Zool. Soc., London, 1844, p. 173.
„ „ „ Conch. Icon., pl. 10, species 70.
„ „ Thes. Conch., vol. 4, Mitra pl. 19, fig. 369.

*Hab.* Cape Grenville, North-East Australia, 12, 20 fathoms, mud bottom; Bet Island, Torres Straits, 11 fathoms, bottom, coarse sand with broken stones and coral; Darnley Island, Torres Straits, 5, 10, 15, 20, 30 fathoms, bottom mud and sandy mud.

### 39.—CANCILLA PURA.

*Mitra pura*, A. Adams, Proc. Zool. Soc., London, 1851, p. 136.
„ „ Sowerby, Thes. Conch., vol. 4, Mitra, pl. 25, fig. 566.

*Hab.* Cape Grenville, North-East Australia, 20 fathoms, sandy-mud bottom, one specimen found; Cape York, North Australia, 5 fathoms, bottom sand, three specimens found; Warrior Reef, west side Torres Straits, 8 fathoms, bottom hard mud, three specimens found; Darnley Island, Torres Straits, 15, 20, 30 fathoms, bottom sand with mud, eighteen found—all fine specimens; Katow, New Guinea, 4 fathoms, mud specimens dead.

### 40.—CHRYSAME ROTUNDILIRATA.

*Mitra rotundilirata*, Reeve, Proc. Zool. Soc., London, 1844, p. 183.
„ „ „ Conch. Icon., pl. 23, species 178.
„ „ Sowerby, Thes. Conch., Mitra, pl. 16, fig. 278.

*Hab.* Darnley Island, Torres Straits, 10, 20, 30 fathoms, sandy mud bottom.

### 41.—CHRYSAME TABANULA.

*Mitra tabanula*, Lam., Anim. Sans Vert. tome 7. p. 323.
„ „ Reeve, Conch. Icon., pl. 39, species 332.

*Mitra tabanula*, Sowerby, Thes. Conch., vol. 4, Mitra pl. 16, fig. 280, 281.

*Hab.* Darnley Island, Torres Straits, found on the reefs under coral.

### 42.—CHRYSAME FRAGA.

*Mitra fragra*, Quoy and Gaimard.
„ *perigra*, Reeve, Proc. Zool. Soc., London, 1844, p. 184.
„ „ „ Conch. Icon., pl. 24, species 186.
„ *fraga*, Sowerby, Thes. Conch, vol. 4, Mitra pl. 16, fig. 284.

*Hab.* Palm Island, North-East Australia, found under coral on the reefs at low water—true specimen of the Mitra fraga, Quoy.; Darnley Island, Torres Straits, found under coral and stones at low water—Variety, *Mitra peregra*, Reeve.

### 43.—STRIGATELLA DICHROA.

*Mitra dichroa*, A. Adams, Proc. Zool. Soc., London, 1851, p. 140.
„ „ Sowerby, Thes. Conch., vol. 4, Mitra, pl. 22, fig. 463.

*Hab.* Dungeness Island, Torres Straits. One specimen found on the reef under coral.

### 44.—TURRICULA COSTELLARIS.

*Mitra costellaris*, Lam., Anim. Sans Vert, tome 7, p. 308.
„ „ Sowerby, Thes. Conch., vol. 4, Mitra, pl. 2, fig. 25.

*Hab.* Hall Sound, New Guinea. One dead specimen found on the beach.

### 45.—TURRICULA CORRUGATA.

*Mitra corrugata*, Lam., Anim. Sans Vert., tome 7, p. 308.
„ „ Sowerby, Thes. Conch., vol. 4, Mitra pl. fig. 41, 42.

*Hab.* Palm Island, North-East Australia, found on the reef under coral, four specimens obtained; Cape York, North Australia, one specimen found on the beach.

### 46.—TURRICULA PLICATA.

*Mitra plicata*, Klein.
*Voluta plicaria*, Linn. Gmel., p. 3452, No. 55.

*Mitra plicaria*, Lam., Anim. Sans Vert., tome 7, p. 307.
„ „ Chenu Manuel de Conch., p. 195, fig. 1013.
*Mitra plicata*, Sowerby, Thes. Conch., vol. 4, Mitra pl. 2, fig. 26,

*Hab.* Low Island, Trinity Bay, North-East Australia. One specimen found on the reef.

### 47.—TURRICULA TÆNIATA.

*Mitra tæniata*, Lam., Anim. Sans Vert., tome 7, p. 307.
„ „ Chenu Manuel de Conch, p. 196, fig. 1028.
„ „ Sowerby, Thes. Conch., vol. 4, Mitra pl. 4, fig. 51, 52.

*Hab.* Darnley Island, Torres Straits, 5, 10 fathoms, white sandy mud bottom. Two fine living specimens and two dead obtained.

### 48.—TURRICULA JUKESI.

*Mitra Jukesii*, A. Adams, Proc. Zool. Soc., London, 1851, p. 139.
„ „ Sowerby, Thes. Conch., vol. 4, Mitra pl. 9., fig. 115, 116.

*Hab.* Palm Island, North-East Australia. One specimen found on the reef under coral. Specimens in my own collection are from Port Darwin, North-West Australia (by Mr. Bednall).

### 49.—TURRICULA VULPECULA.

*Volluta vulpecula*, Linn. Gmel. p. 3451, No. 54.
*Mitra* „ Lam., Anim. Sans Vert. tome 7, p. 309.
„ „ Sowerby, Thes. Conch., vol. 4, Mitra pl. 2, fig. 13.

*Hab.* Darnley Island, Torres Straits. One living specimen was found under coral on the reef.

### 50.—TURRICULA CURVILIRATA.

*Mitra curvilirata*, Sowerby, Thes. Conch., vol. 4, Mitra pl. 9, fig. 128, 129.

*Hab.* Darnley Island, Torres Straits, 20, 30 fathoms, white sandy bottom. Two specimens found.

### 51.—TURRICULA ANTONELLI.

*Mitra Antonelli*, Dorhn, Proc., Zool. Soc., London, 1860, p. 367.

„ „ Sowerby, Thes. Conch., vol. 4, Mitra pl. 26, fig. 586.

*Hab.* Darnley Island, Torres Straits, 10 fathoms, sandy bottom.

### 52.—TURRICULA FORMOSA.

*Mitra formosa*, A. Adams, Proc. Zool. Soc., London, 1851, p. 138.

„ „ Sowerby, Thes. Conch., vol. 4, Mitra, pl. 14, fig. 235.

*Hab.* Darnley Island, Torres Straits, 30 fathoms, white sandy bottom. One specimen found.

### 53.—TURRICULA AURANTIA.

*Voluta aurantia*, Gmelin.

*Mitra aurantiaca*, Lam., Anim., Sans Vert. tome 7, p. 316.

„ *Peronii*, „ „ „ „ „ p. 322.

„ *aurantia*, Sowerby, Thes. Conch., vol. 4, Mitra pl. 15, fig. 251.

*Hab.* Darnley Island, Torres Straits. One specimen found under stones.

### 54.—TURRICULA HASTATA.

*Mitra hastata*, Sowerby, Thes. Conch., vol. 4, Mitra pl. 27, fig. 620, pl. 28, fig. 632.

*Turricula casta*, A. Adams, not Solander.

*Hab.* Darnley Island, Torres Straits, 20, 30 fathoms, sandy mud bottom.

The name *casta* having been previously occupied by Solander, Mr. Sowerby changed the name as above.

### 55.—COSTELLARIA ARENOSA.

*Mitra arenosa*, Lam., Anim. Sans Vert., tome, 7, p. 321.

„ „ Sowerby, Thes. Conch., vol. 4, Mitra pl. 20, fig. 423, 426.

*Hab.* Darnley Island, Torres Straits. Two specimens found under stones.

### 56.—COSTELLARIA AMANDA.

*Mitra amanda*, Reeve, Proc. Zool. Soc., London, 1845, p. 59.
„ „ „ Conch. Icon., pl. 38, fig. 318.
„ „ Sowerby, Thes. Conch., Mitra pl. 26, fig. 592.

*Hab.* Palm Island, North-East Australia, 8 fathoms, mud bottom; Princess Charlotte Bay, North-East Australia, 13 fathoms, sandy mud bottom; Cape Grenville, North-East Australia, 20, 30 fathoms, fine white sandy mud bottom; Evans Bay, Cape York, 6 fathoms, coarse sand bottom; Darnley Island, Torres Straits, 5, 10, 20, 30 fathoms bottom mud, fine sand, and sandy mud. I have dredged the same species in Noumea Harbour, New Caledonia, at various depths from a mud bottom.

### 57.—COSTELLARIA MICHAUI.

*Mitra Michaui*, Cross and Fischer, French Journal de Conch., 1864, vol. 12, p. 337.
„ *rigida*, Reeve, Conch. Icon. p. 22, species 169.
„ *Michaudi*, Sowerby, Thes. Conch., vol. 4, Mitra pl. 10, fig. 157.

*Hab.* Darnley Island, Torres Straits. One fine specimen found on the reef under a block of coral.

### 58.—COSTELLARIA ARMILLATA.

*Mitra armillata*, Reeve, Proc. Zool. Soc., London, 1845, p. 58.
„ „ „ Conch. Icon., pl. 37, species 315.
„ „ Sowerby, Thes. Conch , vol. 4, pl. 22, fig. 496.

*Hab.* Mud Bay, Cape York, North Australia. One specimen found on the beach.

### 59.—COSTELLARIA LUBENS.

*Mitra lubens*, Reeve, Proc. Zool. Soc., London, 1845, p. 61.
„ „ „ Conch. Icon., pl. 39, species 331.
„ „ Sowerby, Thes. Conch., vol. 4, Mitra pl. 24, fig. 542.

*Hab.* Darnley Island, Torres Straits, 15 fathoms rough sand bottom.

### 60.—COSTELLARIA LONGISPIRA.

*Mitra longispira,* Sowerby, Thes. Conch., vol. 4, Mitra pl. 20, fig. 403, page 36.

*Hab.* Palm Island, North-East Australia, 8 fathoms mud bottom. One fine living specimen found.

### 61.—COSTELLARIA DELICATA.

*Mitra delicata,* A. Adams, Proc. Zool. Soc., London, 1851, p. 137.

*Hab.* Darnley Island, Torres Straits, 15 fathoms, sandy mud bottom.

### 62.—CALLITHEA OBLESCUS.

*Mitra oblescus,* Reeve, Proc. Zool. Soc., 1844, p. 175.
„ „ „ Conch. Icon., pl. 15, species 107.
„ „ Sowerby, Thes. Conch., vol. 4, Mitra pl. 9, fig. 126, 127.

*Hab.* Cape York, North Australia, 11 fathoms, sandy mud bottom; Darnley Island, Torres Straits, 20, 30 fathoms mud bottom.

### 63.—CYLINDRA CRENULATA.

*Voluta crenulata,* Chemn. Conch. 10t 150, fig. 1413, 1414.
*Mitra* „ Lam., Anim. Sans Vert., tome 7, page 315.
„ „ Sowerby, Thes. Conch., vol. 4, Mitra pl. 18, fig. 345.

*Hab.* Darnley Island, Torres Straits. One specimen found under coral on the reef.

### 64.—IMBRICARIA CONICA.

*Imbricaria conica,* Schumacher, 236, p. 21, fig. 5.
*Mitra conica,* Reeve, Conch. Icon., pl. 27, species 216.
„ „ Sowerby, Thes. Couch., vol. 4, Mitra, pl. 18, fig. 364, 365.
*Conohelix conicus,* Chenu Manuel de Conch., p. 197, fig. 1033.
*Conoelix marmorata,* Swainson.

*Hab.* Low Island, Trinity Bay, North-East Australia. Found in small pools of water on the sand flats.

The genus Imbricaria was first described by Schumacher in 1817, since then Swainson has caused great confusion by the use of the following generic names :—

*Conoelix*, Swainson, Proc. Zool. Soc., London, 1833, p. 197.
*Conœhelix*, Swainson Malocology, 1840, p. 127, 128, 129, 133.
*Conœiix* „ „ „ p. 318, 321.
*Conohelix*, Callow and Reeve, Conchologists, Nomenclator, 1845, p. 296.
„ Gray, Proc. Zool. Soc., London, 1847, p. 142.
*Conohœlix*, Sowerby, Thes. Conch., vol. 4, Mitra p. 14.

## Remarks on the large number of Game Birds which have of late been offered for sale in Sydney—by E. Pierson Ramsay, F.L.S., Curator of the Australian Museum, Sydney.

During the last month or so the amount of game exhibited in the Sydney markets, and at the stalls of the various dealers and poultrymen throughout the city, is somewhat remarkable, especially when we are so accustomed to hear the oft-repeated, hackneyed expression that there is "little or no game to be found in Australia." People were beginning to believe this, as they did the absurd statements that our Australian flowers had no scent, and our birds no song. It is gratifying to find that such large quantities of game *can* be found when there is a sufficient demand for it. I find that most of the game has been obtained from Melbourne side, having been shot on the extensive lakes and lagoons in the neighbourhood of Ballarat, &c., and from whence they are forwarded per rail to Melbourne. Lake Burrumbeet and some lagoons in that vicinity are at present swarming with wild fowl; but, nearer home, we find Lake George and Lake Bathurst equally well stocked, the lakes and extensive swamps and lagoons in the Illawarra district also, particularly about Shoalhaven, are supplying Sydney with large quantities, while a few come from the Hunter and Paterson districts. The game birds usually offered for sale consist of chiefly the Black Duck, Teal, the Brown or "White-eyed" Duck, and Blue-winged Shovel-bills; but latterly several other kinds have been obtained, including species not frequently met with. The following is a list of the species which I have observed lately.

1. Black Duck, *Anas superciliosa.*
2. Maned Goose, *Chlamydochen jubata.*
3. Teal, *Anas punctata.*
4. Blue-winged Shoveller, *Spatula rhynchotis.*
5. Pink-eared Shoveller, *Malacorhynchus membranaceus.*
6. "White-eye," White-winged, or Brown Duck, *Nyroca australis.*
7. The Black Swan, *Cygnus atratus.*

These species are found tolerably plentiful throughout the whole of New South Wales, and the supply for the Sydney market is generally obtained from Illawarra. As an article of diet, they rank as enumerated. The Maned Goose is seldom found on the lakes, but prefers the grassy slopes in the vicinity of Creeks and rivers. They are usually known under the name of the Wood Duck, from their habit of settling on the trees, the thicker boughs of which afford them a secure footing. They lay from eight to ten eggs, of a pale cream colour, in the hollow boughs of trees. The Black Swans are found often in immense numbers, but as an article of food are not in much demand.

Among the scarcer kinds which occasionally find their way into poulterers' hands are—

No. 8. The Grey or Freckled Duck, *Anas nœvosa,* not a very palatable bird.

No. 9. The Mountain Duck or Shieldrake, about equal in flavour to the last, but one of the finest and most beautiful of the family, as well as the largest of our Australian Ducks.

No. 10. The Musk Duck, *Biziura lobata,* is sometimes offered for sale, but, being about as good to eat as a Black Shag or Cormorant, is not eagerly sought after by epicures.

Why this bird has such a rank flavour I can hardly tell, its food consists of fresh-water molluscs, *Physa*, *Lymnea*, small *Unios*, and *Cyclas*, with the soft fleshy stems of water-weeds and flags, which they pull up with their powerful bills, and bite the ends off near the roots. The eggs of the Musk Duck are two in number, about three inches in length, of a pale greenish ground colour, and rough to the touch. The nest is made of water-weeds, and placed amongst the flags and sedges in the lagoons and lakes, often at a considerable distance from the land.

All the other species before mentioned, from No. 1 to 6 inclusive, are considered very palatable.

In the northern parts of the colony a large quantity of game birds abound, but there, every one who cares for it, seems to be his own caterer, and few are ever seen offered for sale in the townships. In the Rockhampton district I noticed large flocks of the Pigmy Goose, *Nettapus albipennis*; the Whistling Duck, *Dendrocygna vagans;* and Eyeton's Wood Duck, *Leptotarsus eyetoni;* also, the beautiful white-headed Shieldrake, *Tadorna rajah*, one of the most beautiful species known. I found all these species and *Bernicla jubata* plentiful also, on the lagoons near the mouth of the Burnett river. The Pigmy Goose, and the large semi-palmated goose, *Anseranas melanoleuca*, are also found tolerably plentiful in the Clarence and Richmond River Districts. The latter is occasionally offered for sale in the city, but is not very palatable. On the other hand, the Pigmy Goose is considered quite equal to the Teal and Black Duck, which are looked upon among the best for the table.

In addition to the various species of the Anatidæ which are exposed for sale as articles of food, and looked upon as game birds in Australia, are several species of Plover—

The Spur Wing, *Lobivanellus lobatus.*

The Black-breasted Plover, *Sarciophorus pectoralis.*

The Stilted Plover or Australian Stilt, *Himantopus leucocephalus.*

The Avocet, *Recurvirostra rubricollis;* and

The Banded Stilt, *Chladorhynchus pectoralis.*

The last mentioned is a very rare bird in New South Wales, and I only know, at present, of one instance, brought under my notice by our President, W. Macleay, Esq., of its having been offered for sale in Sydney. In Melbourne, however, it is sometimes met with in the markets. The White-headed Stilt Plovers are more often seen here, and sometimes the Avocets, both of which have been obtained from the Illawarra districts. I believe the Banded Stilts aforementioned had been sent up from Melbourne. None of these, excepting the Spur-wing and Black-breasted Plover, are at all palatable, and it seems a pity that such fine birds should be slain, but I suppose purchasers are found for them, otherwise they would not be sent for sale. There is no accounting for tastes!

The Golden Plover, *Charadrius longipes*, occasionally visits New South Wales in the winter time in large flocks; they are frequently so very fat and oily that it is with great difficulty decent looking skins can be made of them, even by expert taxidermists; at this time of the year they are only fit for the table, and numbers of them find their way there every year. We next come to the Land Rails and Water Hens: the Land Rail, *Rallus* or *Hypotœidia philippensis*, is by far the most delicate flavoured; they arrive here in considerable numbers during August and September, remaining to breed among the long grass and bushes in swampy places, all over the country, and are not unfrequently found nesting in the wheat fields and lucerne paddocks. This species is found all over the continent of Australia, and also in the Fiji and South Sea Islands. The Long-billed Rail, or Lewin's Rail, *Rallus brachypus, Swain,* is by no means rare in some of the swamps about Sydney, but is seldom found in the market; like the preceding, it is a very delicate-flavoured bird. The Red Bill, or Porphyrio (*P. melanotus*), and the Water Hen, *Gallinula tenebrosa*, are more often seen, and lately, numbers of Coot (*Fulica Australis*), have been forwarded from Melbourne. Quail are seldom seen offered for sale, but occasionally they may be obtained. The species found about Sydney are *Turnix varius*, the Forest Quail, and the Swamp Quail, *Synoicus* *australis*—the former has been rather more plentiful this year than usual, and seems to prefer the open forest country, or the rocky slopes and ridges near the coast.

Snipe (*Scolopax australis*) are sometimes obtainable, but, although the rare painted snipe is sometimes found near Sydney, but more often on the swampy flats about Lake George, I have not met with an instance of its finding its way to the Sydney markets, but I have seen specimens, said to have been obtained in the Melbourne markets.

In addition to the species already enumerated, I may mention the following, which are occasionally found with the poulterers: The Australian Crane, or Native Companion, *Grus australasianus;* the Plain Turkey, or Bustard, *Eupodotis australis;* the Bittern, *Botaurus poiciloptilus,* and Green-shanks, *Glottis glottoides.* I heard of a bittern being sold yesterday as a "Bustard," or "Turkey," for the sum of 8s.

The following is a list of the game birds which have been offered for sale in Sydney during the last month, with the prices:—

Black Duck, *Anas superciliosa,* 4s. to 8s. per pair.
Teal, *Anas punctata,* 3s. 6d. to 6s. per pair.
Freckled duck, *Anas nævosa,* 4s. to 8s. per pair.
Shovel-bills, *Spatula rhynchotis,* 4s. to 6s. per pair.
Brown duck, *Nyroca australis,* 4s. to 6s. per pair.
Pink-eared Shovel-bill, *Malacorhynchus membranaceus,* 4s. to 5s. per pair.
Black Swan, *Cygnus atratus,* 6s. to 8s. each.
Mountain Duck, *Casarca tadornoides,* 6s. to 8s. per pair.
Musk Duck, *Biziura lobata,* 4s. per pair.
Semipalmated Goose, *Anseranas melanoleuca,* 8s. each.
Red-bill, *Porphyrio melanotus,* 3s. per pair.
*Galinules, Galinula tenebrosa,* 3s. per pair.
Coot, *Fulica australis,* 3s. per pair.
Native Companion, *Grus australasianus,* 8s. each.
Bittern, *Botaurus australis,* sold as a "turkey" or bustard, 8s. per pair.
Stilted Plover, *Himantopus leucocephalus,* 3s. per pair.
Banded Stilt, *Chladorhynchus pectoralis,* 3s. per pair.

*Erismatura australis*—some of these rare birds, at present the rarest of all our Australian ducks, have lately been obtained for the sum of 5s. per pair.

Since writing the above, the following species have occurred from N. S. Wales :—Dendrocygna vagans, and Anseranus melanolenca.

Mr. Macleay also informs me that one of his taxidermists obtained a fine pair of Blue-billed Ducks, *Erismatura australis*, which had been sent from the Melbourne district among other game birds, and purchased of a poulterer in Sydney.

*Erismatura australis* was formerly supposed to be confined to the Lakes and Swamps of West Australia, but several pairs have been lately obtained in the Melbourne markets.

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## On some new forms of Arachnidæ, by H. H. B. BRADLEY, ESQ.

### SALTICUS MACLEAYANUS, N.S.—PLATE II.

Adult.—Total length, 3 lines ; to extremity of falces, 4¾ lines.

*Cephalothorax* elongate ; capul divided from the thorax by a strong constriction, leaving the former nearly square; thorax not as high as caput, oval, highest in front, arched and marked by furrows corresponding to the legs; colour black, with minute white shining hairs, particularly in the centre of the cephalothorax, thus giving the appearance of a longitudinal white band.

*Eyes* in three rows ; centre anterior eyes very large ; lateral anterior eyes and eyes of third line about equal in size (half as large as central anterior eyes), and placed at the four corners of the square; eyes of the middle row, excessively minute, are as near to the posterior as to the anterior lateral eyes.

*Legs* rather long, slender, with a few minute white hairs ; relative length 4, 1, 2, 3, with but little difference between the 4th and 1st and the 2nd and 3rd pairs respectively ; color—first pair dark reddish brown, except the genual and coxal, which are yellow ; second pair light yellow, the coxal and exinquinal and the underside of the femoral, genual, and tibial, is dark reddish brown ; third pair dark reddish brown, except the tarsi, which are light yellow; fourth pair dark reddish brown, except exinguinal and extreme tip of tarsi, which are light yellow ; in all legs the respective lengths of the femoral, tibial, and metatarsal-cum-tarsal are nearly equal.

*Palpi* about as long as falces; radial joint twice as long as cubital, enlarging gradually towards the extremity, and having a sharp double-curved corneous projection on its outer extremity ; digital twice as long as radial, oval ; palpal organs small, consisting of a simple lobe, with a small white spiral spine coiled one and a half times round the lobe ; extremity hairy.

*Maxillæ* slightly enlarged at the extremities, which are divergent and closely covered on the inner side with hairs which curve inwards.

*Labium* oblong, rounded at the apex.

*Falces* very prominent, long, strong, and massive ; not quite as long as cephalothorax ; inner face flat, outer face slightly rounded ; extremities straight, and not rounded on either side ; above nearly flat for two-thirds of their length, when they slope gradually towards the extremities ; on the outer side, at about one-third of their length from their insertion, is a strong tooth, directed upwards and sidewards ; there is also a strong tooth on the inner extremity ; viewed from below, the falces seem to have a longitudinal furrow ; at the extremity and on the lower edge of this furrow are five strong teeth, about which are some long fine hairs ; color silvery for two-thirds of the length, and then dark brown, with a few minute hairs.

*Fangs* as long as falces, straight, almost the entire length, with a slight curve or hook at the extremity ; slightly thickest at the insertion, and tapering very gradually to the extremity, and without any seration ; colour dark brown for three-fourths their length, then light reddish yellow.

*Abdomen* joined to cephalothorax by a very short cylindrical pedicle ; oval, slightly widening at about one-third of its length :

color dark brown, covered with minute grey hairs; the abdomen comes up to the cephalothorax in such a way that the pedicle is not seen.

A single specimen of this species from Endeavour River, Queensland, in the Macleay Museum, was collected as an ant, and the mistake was not discovered until the insect came into the hands of its present possessor. This species is peculiarly interesting, as coming close to the Ceylon species—S. bicurvatus and S. plataleoides—described by the Rev. O. P. Cambridge in the Annals and Magazine of Natural History for January, 1860, and it is another instance of close similarity in the araneides from Ceylon and Northern Australia. In the plate the insect is represented at four times its actual size.

### GERROSOMA NOV. GENUS.[a]

*Cephalothorax* entirely hidden by the projection of the front part of the abdomen; cephalic part pointed, elevated, and terminating in a tubercle which carries six eyes.

*Eyes* eight, unequal, round; six, looking forward, placed in two rows on the tubercle, two in the upper, and four in the lower row; the four centre eyes forming a trapezium, widest at the upper part; anterior intermediate eyes largest; laterals very near to these and smallest; the other two eyes, placed in the angles of the cephalothorax, directed laterally.

*Maxillæ* broad, long, and diverging, rounded at the extremities.

*Labium* much broader than long, convex, and rounded at the anterior margin.

*Legs* of two first pairs long, of two hinder pairs short, strong; 1st and 2nd equal 4 and 3.

*Sternum* oval.

*Falces* moderately long, strong, and narrower towards the extremities.

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[a] Γερρον—the oblong shield of the Persians; Σωμα—body.

*Abdomen* much longer than broad, and projecting in such a way as completely to hide the caput.

### GERROSOMA PAPENSE, N.S.

*Maxillæ labium, sternum,* and *cephalothorax* light reddish yellow; *cephalothorax* 004 m. long, .003 in. broad, moderately high and arched; the *caput* marked by a very distinct furrow; there is also a longitudinal furrow running from the back of the caput; rising out of the front part is a tubercle .001 m. high, bearing six *eyes*; these are placed in two lines; the lower, consisting of four eyes, is curved downwards; two centre eyes largest; the eyes of the upper line are half the size of the anterior intermediate eyes, and are placed twice their own diameter apart, and nearly as far above the anterior intermediate eyes; anterior laterals smallest, and nearly touching the anterior intermediates; the tubercle is narrowest at the base (where it is furnished with short hairs), and about as broad as high; the other two eyes are placed in the angles of the cephalothorax, and are directed laterally; all eyes round.

*Maxillæ* about twice as long as broad, rounded at the apex, diverge, and are well furnished on the inner edge with short curved hairs.

*Labium* broader than long.

*Falces* long and strong, tapering slightly, and furnished with a short strong tooth on the inner side; light yellowish red at the insertion, reddish black at the extremity.

*Fangs* short and strong, reddish black.

*Sternum* heart shaped, a little longer than broad.

*Palpi* reddish, broad, strong, and well furnished with hairs.

*Legs* reddish brown, with darker spots, and moderately furnished with grey hairs; 1 and 2 pairs equal 017 m., 4th pair 614 m., 3rd pair 01 m.

*Abdomen* .012 m. long, and in the broadest part (two-thirds of its length) 0055 m. broad; projecting past the cephalothorax in such a way as completely to conceal it when looked at from above;

**of a dark reddish brown with grey markings; furnished in front with four short pointed tubercles; marked at the posterior part with transverse furrows; on the underside of the same colour, and with a strong triangular pointed ovipositor at the epigyne.**

**One female specimen from Hall Sound, New Guinea, among the insects collected in the Chevert expedition. I know nothing of its habits, and propose to place the genus provisionally among the Ruditelariæ.**

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## MONDAY, 28TH AUGUST, 1876.

WILLIAM MACLEAY, President, in the Chair.

The following donations were announced:—

Descriptions of new species of Shells from Queensland, with colored Plates—2 pamphlets originally published in the Zool. Soc. Proceedings of December, 1874, and January, 1875—by the author, JOHN BRAZIER, C.M.Z.S.

The following papers were read:—

### Shells collected during the Chevert Expedition. By JOHN BRAZIER, C.M.Z.S.

### FAMILY MARGINELLIDÆ.

### 1.—MARGINELLA GUTTULA.

*Marginella guttula*, Reeve, Conch. Icon., pl. 20, sp. 101.

*Hab.* Cape Grenville, North-East Coast of Australia, 20 fathoms; Cape York, North Australia, 5, 11 fathoms, sandy mud bottom; Darnley Island, Torres Straits, 10, 20, 30 fathoms, sandy bottom.

This species is allied to *Marginella attenuata*, Reeve, found in Port Jackson (Brazier).

### 2.—MARGINELLA SP.?

*Hab.* York Island, Torres Straits, 12 fathoms, mud bottom. One specimen obtained dead somewhat allied to *Marginella guttula*, Reeve.

### 3.—MARGINELLA SP. ?

*Hab.* Darnley Island, Torres Straits, 10 fathoms, sandy mud bottom. One specimen found, very much sea-worn.

### 4.—MARGINELLA SP. ?

*Hab.* Darnley Island, Torres Straits, 10 fathoms, sandy mud bottom. Two sea-worn specimens found.

### 5.—MARGINELLA SP. ?

*Hab.* Katow, New Guinea, 5 fathoms, mud bottom. Three specimens found, very much sea-worn.

### 6.—MARGINELLA (PRUNUM) LAVIGATA, N. SP.

Shell ovate, white ; spire short, somewhat rounded at the angle; whorls, 4, smooth, flattened, white, glossy, rather thick ; columella 5, plaited, the upper one short rounded nearly obsolete, the three centre strongly thickened, the lower slightly twisted ; outer lip straight, having 17 teeth on the edge, thickly margined behind.

Length 3, breadth 1¾ lines.

*Hab.* Darnley Island, Torres Straits, 10, 20, 30 fathoms, white sandy mud bottom ; Katow, New Guinea, 7 fathoms, mud bottom.

A pure white shell, allied in form to *Marginella candida*, Sowerby, much more angular and conical, with the outer lip more strongly denticulated than that species.

### 7.—MARGINELLA (GIBBERULA) PISUM.

*Marginella pisum*, Reeve, Conch. Icon., pl. 27, sp. 156.

*Hab.* Darnley Island, Torres Straits, 20, 30 fathoms, white sandy bottom. Out of forty specimens obtained only one living, the remainder all sea-worn.

### 8.—VOLVARIA FUSIFORMIS.

*Marginella fusiformis*, Hinds, Proc. Zool. Soc. London, 1844, p. 75.

" " Sowerby, Thes. Conch., vol. 1, p. 382, pl. 75, fig. 76, 77.

*Hab.* Cape York, North Australia, 5, 11 fathoms, sandy mud bottom; Katow, New Guinea, 7 fathoms, mud bottom, specimens dead; Darnley Island, Torres Straits, 15, 20, 30 fathoms, sandy bottom.

### 9.—ERATO GALLINACEA.

*Ovulum gallinaceum*, Hinds, Moll. Voyage, Sulphur.

*Erato gallinacea*, Sowerby, Thes. Conch., vol. 3, p. 83, Thes. pl. 219, fig. 33, 34.

*Hab.* Darnley Island, Torres Straits, 20, 30 fathoms, sandy bottom.

### 10.—ERATO ANGYOSTOMA.

*Erato angyostoma*, Sowerby, Conch. Illust. f. 51.

„ „ „ Thes. Conch. vol. 3, p. 83, Thes. pl. 219, fig. 19, 20, 23, 24.

*Hab.* Darnley Island, Torres Straits, 20, 30 fathoms, sandy bottom, found with *E. gallinacea* (Hinds); Katow, New Guinea, 7 fathoms, sandy mud bottom.

## SUB-FAMILY COLUMBELLINÆ.

### 11.—COLUMBELLA FULGURANS.

*Colombella fulgurans*, Lam. Anim. Sans Vert., tome 7, p. 296.

„ *punctata* „ „ „ „ „ p. 297.

*Columbella fulgurans*, Sowerby, Thes. Conch., vol. 1, p. 125, pl. 38, fig. 94, 95, 96.

„ „ Reeve, Conch. Icon., pl. 11, sp. 50 a,b.

*Hab.* Barnard Islands No. 3, North-East Coast of Australia; Barrow Island, North-East Australia; Cape Grenville, North-East Australia, found under stones.

The figure given by Sowerby in Thesaurus Conchyliorum at pl. 38, fig. 94, is Lamarck's *C. punctata.* Lamarck in his "Historie Naturelle des Animaux sans Vertébres," 1822, uses the term *Colombella,* all recent writers the term *Columbella.*

### 12.—COLUMBELLA SCRIPTA.

*Columbella scripta*, Lam. Anim. Sans Vert. 1822, tome 7, p. 295.

„ *versicolor*, Sowerby, Proc. Zool. Soc., London, 1832, p. 119.

*Columbella versicolor*, Sowerby, Thes. Conch., vol. 1, p. 117, pl. Thes. 35, figs. 41-46.

*Hab.* Warrior Reef, Torres Straits, found in coral at low water.

Mr. Sowerby ignores Lamarck's specific name of *scripta*, and redescribes it under another name of *versicolor*. Specimens from New Caledonia, Solomon Islands, and Port Jackson, agree with the description of the markings given by Sowerby, but not in the columellar having two prominent teeth within. Some hundreds of specimens examined by me have on the edge of the columella 7 teeth, and well below 2 more.

### 13.—COLUMBELLA NIVOSA.

*Columbella nivosa*, Reeve, Conch. Icon., pl. 26, sp. 166

*Hab.* Palm Island, North-East Australia, found on the reefs under coral at low water.

I think Reeve must be wrong in giving Guatemala as the locality for this species. It is allied to *Columbella scripta*, (Lam.)

### 14.—COLUMBELLA (MITRELLA) ESSINGTONENSIS.

*Columbella Essingtonensis*, Reeve, Conch. Icon., pl. 27, sp. 174, a, b.

*Hab.* Cape York, North Australia, found crawling on the sand flats at low water. Specimens vary from blackish brown to dirty white, having two chestnut lines on the last whorl; others have one broad band.

### 15.—COLUMBELLA (MITRELLA) INTEXTA.

*Columbella intexta*, Gaskoin, Proc. Zool. Soc., London, 1851, p. 7.
„ *intertexta*, Reeve, Conch. Icon., pl. 17, sp. 88.

*Hab.* Darnley Island, Torres Straits, 20, 30 fathoms, white sand bottom.

### 16.—COLUMBELLA (MITRELLA) SP. ?

*Hab.* Darnley Island, Torres Straits, 20 fathoms sand bottom. One specimen of this species was found dead and sea-worn.

### 17.—COLUMBELLA (MITRELLA) SP. ?

*Hab.* Cape York, North Australia, 11 fathoms, sandy mud bottom. One sea-worn specimen obtained.

### 18.—Columbella (Mitrella) sp. ?

*Hab.* Katow, New Guinea, 7 fathoms, mud bottom. Two dead and sea-worn specimens found.

### 19.—Columbella (Mitrella) contaminata.

*Columbella contaminata*, Gaskoin, Proc. Zool. Soc., London, 1851, p. 7.

„ „ Reeve, Conch. Icon., pl. 19, sp. 102.

*Hab.* Princess Charlotte Bay, North-East Australia, 14 fathoms, sandy bottom ; Cape York, North Australia, 5, 11 fathoms, sandy mud bottom ; Darnley Island, Torres Straits, 10, 15, 20 fathoms, sandy bottom ; Katow, New Guinea, 4, 7 fathoms, mud bottom ; also found in Nouméa harbour, New Caledonia, 4, 7 fathoms, bottom of weeds and mud.

### 20.—Columbella (Anachis) lentiginosa.

*Columbella lentiginosa*, Hinds, Moll. Voy. Sulphur, pl. 10, f. 21, 22.

„ „ Reeve, Conch. Icon., pl. 37, sp. 240.

*Hab.* Darnley Island, Torres Straits, 10, 15, 20, 30 fathoms, sandy mud bottom. Something like 200 specimens obtained.

### 21.—Columbella (Anachis) regulus.

*Columbella pumila*, Souverbie, French Journal de Conch., 1862, Vol. 11, p. 281, pl. 12, fig. 14, not Columbella pumila, (Dunker).

*Columbella regulus*, Souverbie, French Journal de Conch., 1863, vol. 12, p. 41.

*Hab.* Palm Island ; Barnard Islands No. 3 ; Home Islands off Cape Grenville, North-East Australia. Also Fitzroy Island, found under stones and coral.

The specific name pumila was changed by Souverbie, it having been used by Dunker in Malak Blatter, 1859. The species is found at New Caledonia. Specimens I obtained near Noumea.

### 22.—Columbella (Anachis) digglesi.

*Columbella* (*Anachis*) *Digglesi*, Brazier, Trans. Royal Soc. N. S. W., 1874, p. 32.

*Columbella (Anachis) Digglesi,* Proc. Zool. Soc., London, 1874, p. 671, pl. 83, figs. 11, 12.

*Hab.* Darnley Island, Torres Straits, 20, 30 fathoms white sandy bottom; Katow, New Guinea, 7 fathoms, sandy mud bottom.

The type specimen was dredged by me in 18 fathoms off Fitzroy Island, North-East Australia.

### 23.—COLUMBELLA (ANACHIS) GOWLLANDI.

*Columbella (Anachis) Gowllandi,* Brazier, Trans. Royal Soc., N.S.W., 1874, p. 33.

" " " " Proc. Zool. Soc., London, 1874, p. 671, pl. 83, figs. 15, 16.

*Hab.* Barnard Islands, No. 3, North-East Australia. Five specimens found in company with *Colvmbella regulus* (Souv.).

The type specimen in the British Museum was collected in 1871 by me at No. 6, or Eclipse Island, off Cape Sidmouth, North-East Australia; and in 1872 I found four specimeds at Makera Harbor, San Christoval, Solomon Islands.

### 24.—COLUMBELLA (ANACHIS) SP.?

*Hab.* Katow, New Guinea, 7 fathoms, sandy mud bottom. One dead and seaworn specimen, one line long.

### 25.—COLUMBELLA (ANACHIS) SP.?

*Hab.* Katow, New Guinea, 7 fathoms, sandy mud bottom. Two dead and seaworn specimens found.

### 26.—COLUMBELLA (ANACHIS) SP.?

*Hab.* Katow, New Guinea, 7 fathoms, sandy mud bottom. Three seaworn specimens found.

### 27.—COLUMBELLA (ANACHIS) CLATHRATA, N. SP.

Shell ovately fusiform, yellowish white, polished, longitudinally roundly ribbed, ribs smooth, interstices clathrate; suture canaliculated, noduled above and below, whorls 6, convex, the last lower half transversely grooved on the back giving the surface a noduled appearance; aperture white, nearly oblong ovate, columella straight, with thin lip, having three white nodules, peristome thin at edge, thickened internally, having eight tubercules, the second upper one prominent, somewhat lirate, sinuate at the upper part, canal short, narrow.

Length 3½, breadth 2 lines.

*Hab.* Katow, New Guinea, 7 fathoms, sandy mud bottom. Twelve specimens of this beautiful species were obtained in good condition, some specimens are more strongly clathrate than others.

### 28.—COLUMBELLA (AMYCLA) MARIÆ, N. SP.

Shell acicular, club-shaped, smooth, yellowish brown minutely marked with oblong white opaque spots, whorls 9, flattened, centre of last encircled with a chain of brown and white alternate spots contiguous to the suture; below the suture transparent, spire lengthened, apex acute, aperture long, narrow, peristome thin, thickened behind, edged with brown, interior of aperture white, denticulated, sinuated at the upper part, columella varicose, canal short, recurved.

Length 5, breadth 2 lines.

*Hab.* Hall Sound, New Guinea. Only one fine living specimen was found under a stone on the reef, the chain of brown and white encircling the centre of the last whorl and contiguous to the suture, are the chief characters that distinguish it from any other species known to me.

### 29.—COLUMBELLA (AMYCLA) INSCRIPTA, N. SP.

Shell somewhat oblong, ovate, smooth, whitish, ornamented with reddish brown network, darker and broader towards the centre, whorls 7, slightly convex, suture impressed, marked below with white ovate blotches, then small, narrow ones having a transverse chestnut line between every alternate one; spire lengthened, apex acute, aperture long, wide, interior of aperture ivory white, columella thickened, varicose on the outside, having three prominent little tubercules inside, peristome arcuated, upper part sinuated, denticulated within, canal, short, narrow.

Length 4, breadth 2 lines.

*Hab.* Percy Island, No. 2, North-East Australia, 18 fathoms, found on a piece of *Astreopora,* two living specimens obtained; Cape York, North Australia, 11 fathoms, sandy mud bottom, two specimens found dead; Darnley Island, Torres Straits, one specimen found under a block of coral on the reef; Katow, New Guinea, 7 fathoms, sandy mud bottom, twenty found; Warrior Reef, west side, one specimen found in crevice of *Madrepora* on the reef at low water.

This species is allied in its markings to *Columbella lineolata,* Pease, from Port Jackson and Port Elliot, South Australia, confused by Mr. Angas in Proc. Zool. Soc., 1867, with *Columbella dermestoïdes* of Kiener. *Dermestoïdes* is a West Indian shell.

### 30.—COLUMBELLA (AMYCLA) MERITA, N. SP.

Shell thin, acicular, much contracted at the base, yellowish white, whorls 8, 9, flattened, minutely tabled at the suture, ornamented with roundish opaque white spots, below the suture and between the spots two narrow transverse reddish yellow lines one above the other; the lower having longitudinal lines of the same colour running down, divided with a white band on the centre of last whorl, spire very much lengthened, aperture pear-shaped, peristome thin, sinus at upper part, columella varicose, canal short, narrow.

Length 3½ lines, breadth 1¼ line.

*Hab.* Darnley Island, Torres Straits, 30 fathoms, white sandy bottom. Eight specimens of this fine species were found, the lips not being fully formed.

### 31.—COLUMBELLA (AMYCLA) PUDICA, N. SP.

Shell club-shaped, thinnish, variously mottled with brown, sometimes having minute white spots, or having white and brown flames above and below the suture; whorls 8, angularly spiral, convex, suture slightly tabled, transparent, spire long, apex white, acute, columella curved and varicose at the lower part, peristome thin at edge, very much thickened within, having from 2 to 3 small obtuse teeth, sinuated above, aperture oblong, ovate, canal short, slightly recurved.

Length 3 lines, breadth 1 line.

*Hab.* Darnley Island, Torres Straits, 20, 30 fathoms, white sandy bottom.

Of fifty specimens found, there are not two alike in markings; some are all white, some brown with snow spots, others brown with white flames.

### 32.—COLUMBELLA (AMYCLA) ABYSSICOLA, N. SP.

Shell oblong, pyramidal, smooth, whitish, whorls 8, slightly angled, flatly convex, tabled at the suture, opaque white, spirally encircled in the centre with yellowish brown broad-arrow shaped markings; points showing to the right, marked as four arrows placed one behind the other, opaque between, every alternate space arrow shaped, last whorl below having the markings more numerous and close set; spire short, apex ivory white, columella having seven conspicuous ridges with small expanded lip extending across the body whorl in a thin callus plate; joined to the upper part near the suture, peristome thickened in the middle, strongly denticulated within, aperture oblong ovate, white, canal narrow, short.

Length $1\frac{3}{4}$, breadth $\frac{3}{4}$ line.

*Hab.* Percy Island No 2, North-East Australia, 18 fathoms, found on a piece of *Astreopora* brought up in the dredge from a coral and sand bottom, one specimen found; Darnley Island, Torres Straits, 20, 30 fathoms, white sand bottom, thirteen specimens found; Katow, New Guinea, 7 fathoms, sandy mud bottom, one specimen found.

### 33.—COLUMBELLA (ASTYRIS) LÆTA, N. SP.

Shell ovate, smooth, acuminated at both ends, fulvous, whorls 6, spirally angled, slightly convex, transparent white at the angle, marbled above and below with dark fulvous lines, sometimes flexuously waved, spire short, apex white, rounded, columella smooth, curved, grooved in the middle, inner part forming a sharp lip below upper part, with thin deposit of callus, varicose below on the outside, peristome white, thin at edge, gibbous in the middle, aperture narrow, little more than half the whole length, canal narrow, slightly recurved.

Length 2 lines, breadth $\frac{3}{4}$ line.

*Hab.* Darnley Island, Torres Straits, 20, 30 fathoms, sandy mud bottom, fourteen specimens found.

### 34.—ENGINA ALVEOLATA.

*Purpura alveolata*, Kiener.

*Ricinula alveolata*, Reeve, Conch. Icon., pl. 4, sp. 23.

*Hab.* Palm Island, North-East Australia; Long and Darnley Islands, Torres Straits; Pango Pango Harbour, Tutuila, Navigator's Islands (Brazier), found on the reefs under broken coral.

This species was returned named by Mr. G. F. Angas in 1867 as *Engina lauta*, Reeve; both species are quite distinct as regards colour and markings.

### 35.—ENGINA LAUTA.

*Ricinula lauta*, Reeve. Conch., Icon., pl. 4, sp. 24.

*Hab.* Darnley Island, Torres Straits; Strongs or Oualan Caroline Islands (Brazier).

Larger and more rounded with a reddish band on the centre of the whorls than the preceding species.

### 36.—ENGINA LINEATA.

*Ricinula lineata*, Reeve, Conch., pl. 6, sp. 51.

*Hab.* Barnard Islands No. 3; Fitzroy Island, North-East Australia, found under coral. Seven specimens found.

### 37.—PUSIOSTOMA MENDICARIA.

*Voluta mendicaria*, Linn. Gmel. p. 3448, No. 38.

*Columbella mendicaria*, Lam. Anim. Sans Vert. tome 7, p. 296.

*Ricinula mendicaria*, Reeve, Conch. Icon. pl. 2, sp. 8.

*Columbella mendicaria* (Pusiostoma) Chenu, Manuel de Conch. p. 202, fig. 1106.

*Hab.* Darnley Island, Torres Straits, common under coral.

### FAMILY CASSIDIDÆ.

#### 38.—CASSIS CORNUTA.

*Cassis cornutus*, Linn. Gmel. p. 3472, No. 11.
„ *cornuta* Lam. Anim. Sans Vert. tome 7, p. 219.
„ „ Reeve, Conch. Icon. pl. 1, sp. 2.
„ *labiata*, Chemn. Conch. 11 to 184, f. 1790-1791.
*Cassidea cornuta*, Brug. Dict. No. 17.

*Hab.* Darnley Island, Torres Straits.

This species, the giant of the genus, is quite common throughout Torres Straits.

#### 39.—SEMICASSIS PILA, VAR.

*Cassis pila*, Reeve, Conch., pl. 9, sp. 21.

*Hab.* Darnley Island, Torres Straits, 20 fathoms, white sand bottom. Only one fine living specimen was found.

#### 40.—CASMARIA VIBEX.

*Buccinum vibex*, Linn., Gmel. p. 3479, No. 36.
*Cassis vibex*, Lam. Anim., Sans Vert., tome 7, p. 228.
*Cassidea vibex*, Brug., Dict. No. 1.
*Cassis* „ Reeve, Conch. Icon., pl. 7, sp. 15c. 15b.

*Hab.* Darnley Island, Torres Straits, 5 fathom, sandy mud bottom.

### FAMILY DOLIIDÆ.

#### 41.—DOLIUM CHINENSE.

*Dolium Australie seu Chinense*, Chem., Conch. Cab. 11, f. 1804, 1805.
*Buccinum Chinense*, Dillw. Desc. Cat. 2, p. 585.
„ „ Wood, Index. Testac. pl. 22, f. 7.
*Dolium variegatum*, Phillippi (not Lam.) Neuer, Conch. 3, p. 36, Dol. pl. 3, f. 1, 2.
*Dolium Chinense*, Desh. ed. Lam. 10, p. 146.
„ „ Reeve, Conch. Icon., pl. 6, sp. 10a.

*Hab.* Low Island, Trinity Bay, and Home Islands, off Cape Grenville, North-East Australia, found on the reef in small pools of water.

### 42.—DOLIUM FIMBRIATUM.

*Buccenum dolium*, Linn. Mus. Ulric.
" " Mawe, Conch. pl. 24, f. 1.
" " Burrow, Elements Conch., pl. 16, f. 1.
*Cadus casis*, Bolten, teste Mörch.
*Dolium fimbriatum*, Sowerby, Genera Shells, No. 29.
" " Reeve, Conch. Syst., pl. 264, f. 2, Elements, Conch. vol. 1, pl. 5, f. 24, Conch. Icon. pl. 3, sp. 3b. not 3a.

*Hab.* Hall Sound, New Guinea. Two specimens found on the reef under stones.

## FAM. SYCOTYPIDÆ.

### 43.—SYCOTYPUS FICOIDES.

*Pyrula ficoides*, Lam., Anim. Sans Vert. tome, 7, p. 142.

*Hab.* Darnley Island, Torres Straits, 15, 20, 30 fathoms, sandy mud bottom.

The synonyms of the genus *Sycotypus*, Browne, are *Ficus*, Bolton, not Linn., *Pyrula* (part) Lamarck *Ficula*, Swainson, and *Otus*, Risso.

## FAMILY NATICIDÆ.

### 44.—NATICA LINEATA.

*Natica lineata*, Lam. Anim. Sans Vert., tome 6, p. 201.
" " Reeve, Conch. Icon., pl. 7, sp. 24.

*Hab.* Cape York, North Australia. Found on sand flats at low water, Katow, New Guinea.

### 45.—NATICA MAHEENSE.

*Natica Maheense*, Recluz., M.S., Mus. Cuming, British Museum.
" " Reeve, Conch. Icon., pl. 14, sp. 58, a,b,c.

*Hab.* Darnley Island, Torres Straits, 30 fathoms, sandy bottom. A few specimens of this fine species were found.

### 46.—NATICA GLOBOSA.

*Nerita globosa*, Chem., Conch., vol. 5, p. 188, f. 1896, 1897.
*Natica helvacea*, Lam., Anim. Sans Vert. tome 6, p. 200.

*Hab.* Darnley Island, Torres Straits, 25 fathoms, sandy bottom. One specimen found.

### 47.—NATICA MAROCHIENSIS.

*Nerita marochana*, Chem., Conch., vol. 5, p. 188, f. 1905, 1908.
*Natica marochiensis*, Lam., Anim. Sans Vert., tome 6, p. 203.
*Nerita* ,, Gmelin., p. 3673, No. 15.
*Natica marochiensis*, Reeve, Conch. Icon., pl. 13, sp. 52.

*Hab.* Home Islands, off Cape Grenville, North-East Australia, Hall Sound, New Guinea, also Port Jackson, Solomon, Caroline, and Marshall Islands. Found on Sand flats at low water (Brazier).

### 48.—NATICA CHINENSIS.

*Natica chinensis*, Lam. Anim., Sans Vert., tome 6, p. 204.
,, ,, Reeve, Conch. Icon., pl. 19, sp. 82, a,b.

*Hab.* Darnley Island, Torres Straits, 20, 30 fathoms. Thirteen specimens found.

### 49.—NATICA COLLIEI.

*Natica Colliei*, Recluz., Proc. Zool. Soc., London, 1843, p. 207.
,, ,, Reeve, Conch., Icon., pl. 24, sp. 12a, 12 b.

*Hab.* Darnley Island, Torres Straits, 25, 30 fathoms, sandy bottom ; Warrior Reef, west side, 8 fathoms, sandy mud bottom ; Bet Island, Torres Straits, found on reefs.

### 50.—NATICA AREOLATA.

*Natica areolata*, Recluz., Proc.,Zool. Soc., London, 1843, p. 206.

*Hab.* Cape Grenville, North-East Australia, 20 fathoms, sand and broken shell bottom ; Cape York, North Australia, 11 fathoms, sand bottom ; Bet Island, Torres Straits, 11 fathoms, bottom of broken shells and coral ; found also at the Sow and Pigs bank, Port Jackson, 4 fathoms, sandy bottom, found under stones at Vaucluse Point, washed on shore after south-east gale at Capes Banks and Solander, Botany Bay (Brazier.)

### 51.—NATICA SP. ?

*Hab.* Katow, New Guinea, 7 fathoms, sandy mud bottom. One specimen found in an immature state.

### 52.—NATICA, SP. ?

*Hab.* Cape York, North Australia, 5 fathoms, sandy bottom. One immature specimen found.

### 53.—NATICA, SP. ?

*Hab.* Cape York, North Australia, 5 fathoms, sandy bottom. One sea-worn specimen found.

### 54.—NATICA, SP. ?

*Hab.* Cape York, North Australia, 11 fathoms, sandy mud bottom. Specimens all sea-worn.

### 55.—LUNATIA RAYNOLDIANA.

*Natica Raynoldiana,* Recluz., Proc. Zool. Soc., London, 1843, p. 212.

„ *Raynaudiana,* Reeve, Conch. Icon., pl. 13, sp. 56 a,b.

*Hab.* Cape Grenville, North-east Australia, 15 fathoms, sandy mud bottom : Darnley Island, Torres Straits, 20, 30 fathoms, sandy bottom ; also found at Ponope, Caroline Islands, Noumea, New Caledonia (Brazier).

### 56.—LUNATIA VARIABILIS.

*Natica variabilis,* Recluz., M.S., Mus. Cuming in British Museum.

„ „ Reeve, Conch., Icon., pl. 23, sp. 104 a,b.

*Hab.* Princess Charlotte Bay, North-East Australia, 14 fathoms, rough sand and coral bottom ; Cape York, North Australia, 5, 11 fathoms, sandy mud ; Darnley Island, Torres Straits, 10, 15, 30 fathoms, white sand bottom ; also, Noumea Harbour, New Caledonia, 5 fathoms, bottom of mud and weeds (Brazier).

### 57.—LUNATIA STRANGEI.

*Natica Strangei,* Reeve, Conch. Icon., pl. 18, sp. 81 a,b.

*Hab.* Cape York, Mud Bay, North Australia ; one living specimen was found on the sand flat at Mud Bay ; found also at Moreton Bay and Port Denison, Queensland ; sand-spit, Middle Harbour, Port Jackson (Brazier).

### 58.—NEVERITA ALBUMEN.

*Nerita albumen*, Linn. Gmelin., p. 3671, No. 5.

*Natica* ,, Lam., Anim., Sans Vert., tome, 6, p. 196.

,, ,, Reeve, Conch. Icon., pl. 8, sp. 31 a,b.

*Hab.* Darnley Island, Torres Straits, 30 fathoms, sand bottom. One fine living specimen was found at the above depth.

### 59.—NEVERITA PETEVERIANA.

*Neverita Peteveriana*, Recluz., M.S., Mus. Cuming in British Museum.

*Natica Pitiveriana*, Reeve, Conch. Icon., pl. 5, sp. 17 a,b.

*Hab.* Katow, New Guinea, found on the sands at low water.

### 60.—RUMA MAURA.

*Natica maura*, Brug., Encyclop. Méthodique, pl. 453, fig. 4 a,b.

,, ,, Reeve, Conch. Icon., pl. 7, sp. f. 25 a,b.

*Hab.* Darnley Island, Torres Straits, found on the reefs under coral. Six very fine specimens found.

### 61.—RUMA MELANOSTOMA.

*Natica melanostoma*, Lam., Anim. Sans Vert., tome 6, p. 198.

*Nerita* ,, Gmelin., p. 3674, No. 19.

*Natica* ,, Reeve, Conch., Icon., pl. 8, sp. 30, a,b.

*Hab.* Darnley Island, Torres Straits.

### 62.—RUMA FILOSA.

*Natica filosa*, Sowerby, M.S , Mus. Cuming in British Museum.

,, ,, Reeve, Conch. Icon., pl. 17, sp. 72, a,b.

*Hab.* Low Island, Trinity Bay, North-East Australia, found on sand patches inside the reefs; Cape Grenville, North-East Australia, 15 fathoms, sandy mud bottom; Darnley Island, Torres Straits, 20, 30 fathoms, sandy bottom; also Port Stephens and Port Jackson, New South Wales (Brazier).

### 63.—RUMA MELANOSTOMOIDES.

*Natica melanostomoides*, Quoy., Voy. de l'Astrolabe.

,, ,, Reeve, Conch. Icon., pl. 22, sp. 101.

*Hab.* Cape Grenville, North-East Australia, 30 fathoms, white sand bottom. Only two specimens of this rare species were found.

### 64.—MAMMA STRAMINEA.

*Natica straminea*, Recluz., Proc. Zool. Soc., London, 1843, p. 211.

„ „ Reeve, Conch. Icon., pl. 9, sp. 32, a,b.

*Hab.* Home Islands, off Cape Grenville, North-East Australia, Darnley Island, Torres Straits, found on the sands inside the reefs.

This species M. Recluz makes a variety of *Natica aurantia*, Lam., as Var. B. *Lutea seu straminea.* It differs from the true *aurantia* in being of a beautiful sulphur colour.

### 65.—MAMMA PYRINORMIS.

*Natica pyriformis*, Recluz, Proc. Zool. Soc., London, 1843, p. 211.

„ „ Reeve, Conch. Icon. pl. 5, sp. 16.

*Hab.* Home Islands, off Cape Grenville, North-East Australia; Darnley and Warrior Islands, Torres Straits, on the sands at low water.

### 66.—MAMMA FLEMINGIANA.

*Natica Flemingiana*, Recluz, Proc. Zool. Soc., London, 1843, p. 209.

„ „ Reeve, Conch. Icon. pl. 18, sp. 80, a,b.

*Hab.* Darnley Island, Torres Straits, found on sand flats.

### 67.—MAMMA DEIODOSA.

*Natica deidosa*, Reeve, Conch. Icon., pl. 9. sp. 35 a,b.

*Hab.* Darnley Island, Torres Straits.

### 68.—CATINUS PLANULATUS.

*Sigaretus planulatus*, Recluz, Sowerby, in Reeve, Cohch. Icon., Sigaretus, pl. 2, sp. 7, a, b.

*Hab.* Hall Sound, New Guinea, found on the sands; Bet Island, Torres Straits, 11 fathoms.

### 69.—SIGARETUS EXIMIUS.

*Sigaretus eximius*, Sowerby, Reeve, Conch. Icon., pl. 5, sp. 22, a, b.

*Hab.* Darnley Island, Torres Straits, 20 fathoms, fine white sand ; Evans Bay, Cape York, 7 fathoms, sandy mud.

### FAMILY LAMELLARIIDÆ.

### 70.—LAMELLARIA, SP. ?

*Hab.* Darnley Island, Torres Straits, 30 fathoms, sand bottom. The upper half of a specimen of this genus was obtained dead and sea-worn.

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## On a new genus of Arachnidæ, by H. H. B. BRADLEY, ESQ.

### RHYNCHARACHNE. NOV. GENUS.—PLATE II.

*Cephalothorax* to a considerable extent hidden by the projection of the abdomen ; cephalic part, marked by a deep furrow, pointed, not elevated, and terminating in a tubercle which carries six eyes ; this tubercle projects, and is lower than the hinder part of the cephalothorax.

*Eyes* eight, unequal, round; six placed in two rows on the tubercle, two in the upper and four in the lower row ; four intermediate eyes, directed forwards, forming a trapezium, narrowest at the upper part ; eyes of the upper row larger than the other eyes o' these rows ; laterals of the lower row smallest of a l, as far from the intermediates of that row as are the eyes of the upper row, and placed on the side of the tubercle directed laterally; the other two eyes, placed in the angles of the cephalothorax, are largest of all, and are also directed laterally.

*Maxillæ* hatchet-shaped, short, inclined on the labium, straight on the outer edge, and rounded at the extremities.

*Labium* a little broader than long, convex, and rounded at the anterior margin.

*Legs* of two first pairs long and directed forwards ; of two hinder pairs short and directed backwards—1, 2, 4, 3.

*Palpi* moderately long.

*Sternum* oval.

*Falces* moderately long and strong; fangs short, strongly curved.

*Abdomen* longer than broad, projecting over about half the cephalothorax, broadest at the anterior part, pointed at the posterior.

*R. dromodaria.*

Total length, .007 m.

*Cephalothorax* broad at the posterior part, where it is very high and arched; caput oval, narrower, and separated by a deep furrow; cephalothorax .0035 m. long, .002 broad in the broadest part; moderately high and arched, divided by a deep distinct furrow; caput very slightly higher than the rest of the cephalothorax; projecting from the front part is a blunt tubercle, about .001 m. long, bearing six eyes, as shown in the plate; this tubercle is about as broad as long, and is narrowest at the base; color of cephalothorax, maxillæ, palpi, labium, sternum, light brownish yellow; falces same color, darker towards the points; fangs dark reddish brown.

*Legs and palpi* light yellowish brown; the lower part of the femoral darker, and provided with short tubercles on the inner side; tibial spotted with same colour, moderately furnished with hair, and more so at the extremities; legs—first pair terminated by a triple claw, the upper claw strongest dentated; length of first pair .0105, of second .0095, of fourth .009, of third .007 m.

*Abdomen* .006 m. long and .004 m. broad in the broadest part; triangular, the base being in front, where it projects as far as the insertion of the third pair of legs; of a yellowish grey, with dark marking in the centre part, where it is very much depressed, presenting the "bruised-in" appearance of cœlenia; on the front part are two pointed tubercles; at the anterior angles are double pointed tubercles, and on the sides are three small pointed tubercles; underneath of a similar colour, with a brownish grey triangular spot in the centre.

One female specimen (? mature) from Hall Sound, New Guinea, among the Chevert collection in the Macleay museum. I know nothing of the habits of this insect, and propose also to place it amongst the Ruditelariæ.

## SEPTEMBER 25TH, 1876.

WILLIAM MACLEAY, ESQ., President in the Chair.

The Secretary announced the receipt of a donation from the Rev. Dr. WOOLLS, M.A., of Part 3 of Dr. Von. Mueller's Educational Collection of Australian Plants.

The following Papers were read :—

Observations on the *Genus Risella*, by Rev. J. E. TENISON-WOODS, F.L.S.,F.G.S.,C.M.R.S., Sydney, Tasmania, and of Linn. Soc., N.S.W.

*Risella* is a genus separated from the genus *Trochus* principally on account of the complete absence of any nacreous character, and according to M. Quoy the sexes being in different animals. In 1839, Dr. Gray, in the Zoology of Beechey's Voyage, p. 141, proposed to unite such shells with the genus *Littorina*, but in the following year, in his Synopsis of the British Museum, created a separate genus for their reception, which he named *Risella*, but gave no definition. Philippi, in the Zeitsch. f. Malac. for 1846, gave a definition of the genus and called it *Bembicium*. Finding, however, that he had been anticipated in the name, but not in the description, he with great modesty withdrew his generic title in favor of that of Gray in his Handbuch f. Conch. u. Malak, 1853, p. 176. In 1864, M. H. Crosse gave in the Jour. de Conch., p. 225, a monograph of the whole genus, in which he reviewed the synonomy in an exhaustive manner. He also drew attention to certain peculiarities of real generic value which had escaped previous observers, notably the funiculate thickening of the basal part of the throat. The genus may therefore be characterised as follows :—

### G. RISELLA, *Gray*, 1840.

*Testa univalvis, spiralis, conica, imperforata, haud margaritacea; anfr.* 6-7, *planis, ultimo angulato, sæpe acute carinato. Apertura depressa, obliqua, rhombea ; fauce in parte basali incrassata; columella simplex, obliqua, scindens ; operculum oblongum, corneum, paucispiratum, nucl. marginato.*

This definition differs in important particulars from that of Philippi, Crosse, or Adams, but principally in the thickening of the throat and the oblong paucisprial operculum. No authors have hitherto described the operculum in detail.

M. Quoy in his very elaborate notice of *Trochus melanostomus* and *T. nanus*, now recognised as *Risella melanostoma* and *R. nana*, gives full details of the anatomy. He states (*Voy. de l'Astrolabe, Zool. vol.* 3, *p.* 271-278) that the sexes are distinct. After having dissected a very large number of specimens in Tasmania, I am convinced that the animals are truly hermaphrodite, and are provided in every species with male and female organs. Nevertheless, the sexes seem to be distinct, because some take the office of the male and some the female. In such cases the shells differ, and have been hitherto regarded as distinct species, whereas they are only male and female shells, as I shall presently show.

Mons. Crosse enumerates no less than nine species of the genus, all of which are indigenous to Australian seas. The following is his list:—

*Risella melanostoma*, Chemnitz (?) Gmelin, Crosse, and Angas.

*Hab.* Port Phillip, var. S. Australia. Angas.

*Risella aurata*, Quoy, Deshayes (in Lamarck) Philippi, *Risella lutea*, H. and A. Adams.

*Hab.* D'Entrecasteaux Channel, Tasmania, Quoy; St. Vincent's Gulf, S. A., Crosse.

*Risella nana*, Lamarck, Quoy, Delessert; *Littorina australis*, Gray, *Bembicium nanum* Philippi, *pictum*, *idem R. nana*, H. and A. Adams, Chnu. manuel.

*Hab.* Storm Bay, Tasmania, Quoy; "sur quelques points du grand continent Australien." Crosse.

*Risella plana*, Quoy, Phillippi, Adams.

*Hab.* Western Port, Quoy; St. Vincent's Gulf, Crosse; Port Jackson, Angas.

*Risella lutea*, Quoy, Kiener, Philippi: *Trochus cicatricosus*, Jonas.

*Hab.* Brackish waters, Western Australia; Port Jackson,

*Risella Bruni*, Crosse, Jour. de Conchy., 1864, p. 239.
*Hab.* Spencer's Gulf, South Australia.
*Risella livida*, Philippi, Adams.
*Hab.*—?
*Risella vittata*, Philippi, Adams.
*Hab.* Adelaide (?).
*Risella imbricata*, Gray, Philippi, Adams.
*Hab.*—?

From this list I think we may at once erase the three last. From the definition given by the authors of the specific names, we may be quite sure that we are dealing with mere varieties, or young individuals of the three first species named. Having paid attention to this genus for some years, and having examined some hundreds, nay, I may say thousands of specimens from all the Australian colonies as well as Tasmania, I may safely say that there are no such species as *R. imbricata*, *viatata*, and *livida*, but that individual specimens of *R. nana* may easily be found to correspond with all of them.

It is with some considerable hesitation that I say that I think Mons. Crosse's species, *R. Bruni*, should also be reduced to a mere local variety of *R. nana.* I should say it is no more than a pale and rather more tumid species inhabiting Spencer's Gulf.

This leaves us five species which must again be reduced, because *R. aurata* is only the male animal of *R. nana.* This may appear startling, but it is a fact which I have established after long-continued observation. In the first place, the two animals may be seen breeding together any day upon the rocks of D'Entrecasteaux Channel at low tide. If, moreover, the two species are kept in a small aquarium, they will breed readily, and *R. nana* will be the mother of the fry.

My observations here, however, revealed a still more surprising fact. Having ascertained beyond a doubt that both male and female shells (as for convenience we may call them, though some other term is required to express the sexual relations) are hermaphrodite, if *R. nana* (female) and *R. aurata* (male) are kept apart in separate glass jars, they are seen to couple together, that is, *R. nana* with its own kind, and *R. aurata* with its own kind, as indeed they may sometimes be seen to do upon the rocks; but they do not become fertile. I say this, however, with hesitation, as my observations were only continued for a few weeks, and in that time the experiment could not be regarded as conclusive. It would not surprise me to find that either or both can become fertile, because there are many places on the coast where no species can be found, except the variety now known as *R. aurata.* On the beach by the side of Government House, Hobart Town, no grown specimen of *R. nana* is seen, yet young individuals are just as plentiful there as elsewhere. From my observations, I hold it is quite certain that the normal arrangement is for *R. aurata* to fertilise *R. nana,* which latter brings forth the fry.

How then are we to regard the names *R. nana* and *R. aurata* —as synonyms, or what? The names of species they are not; neither are they the names of varieties. Their date is the same, having both been bestowed by Messrs. Quoy and Gaimard in 1834 *loc. cit., p.* 273, 276, *pl.* 62.) I should prefer keeping *R. aurata* as less liable to lead into error for *nana;* a dwarf is not applicable, the species being by no means the smallest of the genus, and being, moreover, very variable in size. The following is the diagnosis of Messrs. Q. and G. with the synonomy of Crosse.

TROCHUS AURATUS, *Q. and G. l. c. Kiener, species pl.* 34, *f.* 2; *T. melanostomus, Deshayes,* 1843, *in Lamarck, ed.* 2, *vol.* 9, *p.* 157 (*rec Gmelin*); *Bembicium melanostomum, Philippi* 1846, *in Zeits. fur Malak., p.* 130; *Risella lutea, R. and A. Adams,* 1858, *Genera vol.* 1, *p.* 318, *pl.* 33, *fig.* 5, *rec* (*Q. and G.*); *Crosse, Jour. de Conchyl., vol.* 12 (1864), *p.* 233.

*Testa imperforata, conica, rugosa, subplicata, lutea, flammulis longitudinalibus fuscis ornata; basi plana, striata.*

Messrs. Quoy and G. found the species on the rock in D'Entrecasteaux Channel, whence all my specimens came. Mr. G. F. Angas quotes it also as from St. Vincent's Gulf, S. Australia, but the species vary there to some extent, as I shall presently notice. The following is my own diagnosis from a comparison of many hundred species :—

Shell depressedly conical, suborbicular, imperforate, rugoso-plicate, subplicate, or nearly smooth, pale yellow, whitish or brown, clouded, striped with pale green, sometimes mottled white, and livid on the upper whorls; very distinctly spirally grooved, and crossed with much inclined diagonal lines of growth; whorls 6-7 generally undulately plicate at the suture, which is either impressed or overlapping; base very flat, acutely angled at the periphery, which is undulating or round, according as the whorls are plicate or not, spirally lirate with 5-7 spirally raised lines which are diagonally crossed with strongly marked lines of growth and very finely, almost squamosely undulately striate; periphery margined at the base; that is to say, there is always a clear marginal space between the liræ and the edge; aperture subquadrate, much produced above; throat conspicuously enamelled; outer lip thin, margined within with a yellow line, and then generally a rich deep brown; base of throat wholly white, or with a broad white band; columella conspicuously orange, and spirally grooved posteriorly (visible under the lens); the upper part of the throat sometimes brown, sometimes white, but always enamelled. Dimensions of the largest specimen: diameter of base 17, alt. 14, of the smallest 11-7½ millimetres.

It is worthy of remark that in this variety there is little or no thickening of the base, which is denticulate at the edge, but not lirate within; and finally, that the deep brown color is a thick vitreous translucent substance easily separated from the shelly outer covering, and when the basal part of the throat is broken away, it is seen to extend like a broad margin of brunswick black round the upper interior.

The operculum is a pale, translucent yellow, oblong, few whorled, and an almost marginal nucleus.

The odontophore (lingual ribbon) is a very fine, glassy, narrow, flattened tube, about 20 millimetres long, and lying in a coil just below the red fleshy buccal mass. Inside this tube the teeth are affixed to a somewhat thickened transparent membrane. The teeth are very numerous in sets or chevrons of seven; that is to say, three in a diagonal line on each side from a central tooth. They are perfectly vitreous, colorless, and transparent. The central tooth is long-curved and sharp-pointed, with two very small lateral cusps. The first two laterals are also apparently provided with cusps. The outer teeth have a broad summit, which is tridentate. Thus it differs from the dental formula given after Wilton in Woodward's Mollusca (Tate's edit. 1871, p. 252), and from that of Gray (Guide to Mollusca in Brit. Mus., 1857, p. 90). The tube of the odontophore is so very thin that the upper membrane is easily destroyed in drying.

**RISELLA NANA.** *R. t. arbicvlari, subconica, ad periphœriam, acute angulata, cinereo-virente; lineis longitudinalibus fuscis radiantibus; anfr. planiusculis; infima facie plana, concentrice sulcata, violacescente; umbilico nullo.* Lamarck 1822, *an'm. s. verteb.*, gen. Trochus n. 67. Alt. 12, diam. max. 16 mil.

This species or variety, which, as I have said, takes the office of female to *R. aurata*, differs in being a larger and more solid shell with flattened smooth whorls which are seldom rugose, and seldom with the regular plaits of the male variety. It is sometimes much corroded and rough, and is either high and obtusely conical with an obtusely angled periphery, or depressed and very acutely angled. One constant feature it possesses, unless where much corroded, and that is the transverse sloping brown or black lines on a grey or brown ground. It has the same lirate flattened base, with the smooth margin, which is common to all the species known to me. The mouth has a highly polished enamel, variously striped or clouded, yellow and brown, but much paler generally, and with less brown than the preceding variety. It is a larger shell in every way, more solid, and with a thickened base. The odontophore is similar to the last described in the number and arrangement of the teeth, but they are less crowded and longer. It is longer and broader, and like the preceding, a tube.

Though the above differences are plainly marked in the extremes of both varieties, yet it must be admitted that gradations from one form to the other may be found. The spiral liræ with plaits in

*R. aurata,* and the smooth whorls with diagonal lines of color in *R. nana* are the most constant distinction.

*R. melanostoma* is marked with *R. aurata* by Gray *(loc. cit.)* as variety of one species. This I believe. At any rate, the former is unknown to me. It is the oldest name, but from the imperfect diagnosis of Chemnitz it is impossible to identify the shell meant as a Risella.

*R. plana,* Quoy, is a very depressed solid angular lirate and plicate species with a yellowish white mouth. It is longer than the preceding, and its specific characters seem very constant. The animal I have not seen. The shell is found all round the Australian coast from Port Stephens to S. Vincent's Gulf.

*R. lutea,* Quoy, I believe to be only a corroded and brackish water or male variety of the preceding; but I know little of the living habits of the species. In Dr. Cox's extensive collection, I noticed the shells named *R. lutea* which appeared to me a common form of *R. nana* or *aurata,* but adult or perhaps more correctly in old age. It is corroded, and the marginal space on the base is not visible. It is common in Tasmania, and breeds readily with *R. nana.* Mr. Angas says (Zool. Proc. 1867, p. 209), this species, the most conical of the genus, is common on the rocks outside Port Jackson, and along the coast to Kiama and Jervis Bay. Mr. Crosse (loc. cit, p. 238) says, on the authority of MM. Q. and G., that it is found throughout King George's Sound, but principally in the little salt creeks. The only good figures, says M. Grosse, are those of Kiener, in his monograph of the genus *Trochus*—but there is no description as the work is not completed.

Thus we should have only two species of Risella, with male or female varieties of both.

It is possible that these two species may even yet be reduced to one; but I respectfully beg the attention of naturalists to the fact that the sexual differences are marked by differences in the shells. This may open up a most important fact for the whole of our conchological nomenclature. I also call attention to the remarkable manner of breeding of hermaphrodite mollusca. As yet, we know little or nothing of the physiology of reproduction under these peculiar conditions, and I submit that most important physiological and zoological facts are contained therein, bearing on the whole question of evolution. The subject may be said to be at our doors, and may be studied with the greatest ease by anyone who gives it a careful attention. I have written this paper in the hope of drawing other observers into this most inviting and interesting field.

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## Shells collected during the Chevert Expedition, with Descriptions of the New Species, by J. BRAZIER, C.M.Z.S.

### FAMILY SCALARIDÆ.

#### 1.—SCALARIA REPLICATA.

*Scalaria replicata*, Sow. Jun., Proc. Zool. Soc., London, 1844, p. 11.

„ „ Sowerby, Thes. Conch., vol. 1, p. 84, pl. 32, f. 23, 24.

*Hab.* Darnley Island, Torres Straits, 10 fathoms, sandy mud.

#### 2.—SCALARIA PHILLIPPINARUM.

*Scalaria Phillippinarum*, Sowerby, Jun. Proc. Zool. Soc., London, 1844, p. 12.

„ „ Thes. Conch., vol. 1, p. 85, pl. 32, f. 21, 22.

*Hab.* Darnley Island, Torres Straits, 10 fathoms, sandy mud. This species is also found in Port Jackson.

#### 3.—SCALARIA IRREGULARIS.

*Scalaria irregularis*, Sowerby, Proc. Zool. Soc., London, 1844, p. 13.

„ „ „ Thes. Conch., vol. 1, p. 90, pl. 33, f. 40, 60.

*Hab.* Bet Island, Torres Straits, 11 fathoms, coral and sand. Specimens also found on the beaches inside the reefs after gales.

### 4.—SCALARIA TENUI-COSTATA.

*Scalaria tenui-costata*, Sowb. Jun., in Sowerby Thes. Conch., vol. 1, p. 87, pl. 34, f. 76, not in Proc. Zool. Soc., London, 1844.

*Hab.* Bet Island, Torres Straits, 11 fathoms, coral and sand.

### 5.—SCALARIA RUBRO-LINEATA.

*Scalaria rubro-lineata*, Sowerby, Thes. Conch., vol. 1, p. 91, pl. 34, f. 83.

*Hab.* Darnley Island, Torres Straits, 20 fathoms, sandy mud.

### 6.—SCALARIA SUBNUDATA.

*Scalaria delicatula*, H. Adams, Proc. Zool. Soc., London, 1869, p. 274.

„ *subnudata*, Sowerby, Reeve, Conch. Icon., pl. 14, sp. 11.

*Hab.* Darnley Island, Torres Straits, 20, 30 fathoms, sandy mud. *Scalaria delicatula* pre-occupied by Crosse, 1864.

### 7.—SCALARIA TURRICULA.

*Scalaria turricula*, Sowerby, Jun., Sowerby, Thes. Conch., vol. 1, p. 92, pl. 34, f. 88.

*Hab.* Princess Charlotte Bay, North-East Australia, 13 fathoms, sand; Bet Island, Torres Straits, 11 fathoms, coral and sand.

### 8.—SCALARIA CASTA.

*Scalaria casta*, A. Adams, Proc. Zool. Soc., London.

„ „ Sowerby, Reeve, Conch. Icon., pl. 11, sp. 86.

*Hab.* Darnley Island, Torres Straits, 20 fathoms, sandy mud.

### 9.—SCALARIA AURITA.

*Scalaria aurita*, Sowerby, Jun., Proc. Zool. Soc., London, 1844, p. 26.

„ „ „ Thes. Conch., vol. 1, p. 92, pl. 33, f. 62.

*Hab.* Darnley Island, Torres Straits, 20 fathoms, sandy mud. One specimen found.

### 10.—SCALARIA ACULEATA.

*Scalaria aculeata*, Sowerby, Jun., Proc. Zool. Soc., 1844, p. 12.
" " " Thes. Conch., vol. 1, p. 86, pl. 32, f. 36.

*Hab.* Darnley Island, Torres Straits, 20 fathoms, sand; Warrior Reef, west side, 8 fathoms, hard mud; Katow, New Guinea, 7 fathoms, sandy mud.

### 11.—SCALARIA MURICATA.

*Scalaria muricata*, Kiener, Iconog., Coq., pl. 4, f. 11.
" " Sowerby, Thes. Conch., vol. 1, p. 86, pl. 32, f. 31.

*Hab.* Cape Grenville, North-East Australia, 15 fathoms, sandy mud; Darnley Island, Torres Straits, 20, 30 fathoms; Katow, New Guinea, 7 fathoms.

Specimens not in very good condition.

### 12.—SCALARIA OBLIQUA.

*Scalaria obliqua*, Sowerby, Jun., Sowerby, Thes. Conch., vol. 1, p. 89., pl. 33, f. 69.

*Hab.* Bet Island, Torres Straits, 11 fathoms, coral and sand.

### 13.—SCALARIA DENTICULATA.

*Scalaria denticulata*, Sowerby, Thes., Conch., vol. 1, p. 87, pl. 32, f. 25, 26.

*Hab.* Darnley Island, Torres Straits, 15, 20 fathoms, sandy mud. Fourteen fine specimens of this species were found.

### 14.—SCALARIA HYALINA.

*Scalaria hyalina*, Sowerby, Jun., Proc. Zool. Soc., London, 1844, p. 11.
" " " Thes. Conch., vol. 1, p. 85, pl. 32, f. 21, 22.

*Hab.* Darnley Island, Torres Straits, 30 fathoms, sandy mud: also Port Stephens and Port Jackson, New South Wales, 5, 10 fathoms, white sand bottom (Brazier).

### 15.—SCALARIA SP. ?

*Hab.* Darnley Island, Torres Straits, 20 fathoms. One specimen obtained very much sea-worn

### 16.—SCALARIA SP. ?

*Hab.* Cape Grenville, North-East Australia. Two specimens found dead, having all the varices worn off.

### 17.—SCALARIA VESTALIS.

*Scalaria vestalis,* Hinds, Proc. Zool. Soc., London, 1843, p. 125.
„ „ Sowerby, Thes. Conch., vol. 1, p. 93, pl. 34, f. 97.

*Hab.* Cape York, North Australia, 11 fathoms, sand and mud. One specimen was found of this beautiful species.

### 18.—SCALARIA CONCINNA.

*Scalaria concinna,* Sowerby, Jun., Proc. Zool. Soc., London, 1844, p. 28.
„ „ „ Thes. Conch., vol. 1, p. 97, pl. 33, f. 63.

*Hab.* Katow, New Guinea, 8 fathoms, sandy mud. Only one specimen was found of this pretty species.

### 19.—SCALARIA SP. ?

*Hab.* Cape Grenville, North-East Australia, 25 fathoms, sand. Specimen having the whole of the aperture, and two or three of the upper whorls broken; what remains of it resembles *Scalaria vulpina* (Hinds).

### 20.—SCALARIA, SP. ?

*Hab.* Darnley Island, Torres Straits, 30 fathoms, sandy mud.

Small shell, very finely cancellated; somewhat seaworn. One specimen obtained, with the aperture broken.

### 21.—SCALARIA VARICOSA.

*Scalaria varicosa,* Lam. Anim. Sans Vert., tome 6, p. 227.
„ *fimbriata,* Lam. Encyclop., pl. 451, f. 4 a,b.

*Scalaria varicosa*, Sow. Thes. Conch., vol. 1, p. 103, pl. 35, f. 126, 128.

*Hab.* Darnley Island, Torres Straits, 30 fathoms, white sand. One fine living specimen was found.

## FAMILY TEREBRIDÆ.

### SUB-FAMILY TEREBRINÆ.

### 22.—ACUS MACULATUS.

*Buccinum maculatum*, Linn. Gmel., p. 3499, No. 130.

*Terebra maculata*, Lam. Anim. Sans Vert., tome 7, p. 283.

" " Sowerby, Thes. Conch., vol. 1, p. 150, pl. 42, f. 33.

" " Reeve, Conch. Icon., pl. 1, sp. 4.

*Hab.* Darnley Island, Torres Straits, found on the sands at low water.

### 23.—ACUS CHLORATUS.

*Terebra chlorata*, Lam., Anim. Sans Vert., tome 7, p. 288.

" *Knorrii*, Gray, Proc. Zool. Soc., London, 1834, p. 59.

" *chlorata*, Sowerby, Thes. Conch. vol. 1, p. 158, pl. 42, f. 29.

" " Reeve, Conch. Icon., pl. 3, sp. 11.

*Hab.* Darnley Island, Torres Straits, found on the sands.

### 24.—ACUS JUKESI.

*Terebra Jukesi*, Deshayes, French Journal de Conch., vol. 6, 1857, p. 95, pl. 5, f. 9.

*Hab.* Evans Bay, Cape York, North Australia, 6 fathoms, sand.

### 25.—ACUS (ABRETIA) TENERA.

*Terebra tenera*, Hinds, Proc. Zool. Soc., London, 1843, p. 158.

" " Sowerby, Thes. Conch., vol. 1, p. 184, pl. 45, f. 111.

*Hab.* Evans Bay, Cape York, North-East Australia, 6 fathoms, sand.

### 26.—HASTULA MARMORATA.

*Terebra marmorata*, Deshayes, Reeve, Conch. Icon., pl. 19, fig. 91 a, b.

*Hab.* Cape Grenville, North-East Australia, 20 fathoms, sandy mud; Sue Island, 11 fathoms, sand; Darnley Island, Torres Straits, 20, 30 fathoms.

### 27. HASTULA SPECTABLIS.

*Terebra spectablis*, Hinds, Proc. Zool. Soc., London, 1843, p. 150.
„ „ Sowerby, Thes. Conch., vol. 1, p. 157, pl. 44, f. 88.
„ „ Reeve, Conch. Icon., pl. 19, sp. 93 a, b.

*Hab.* Darnley Island, Torres Straits, 15 fathoms, white sand.

### 28.—TEREBRA STRAMINEA.

*Terebra straminea*, Gray, Proc., Zool. Soc., 1834, p. 62.
„ „ Sowerby, Thes. Conch., vol. 1, p. 169, pl. 42, fig. 22, 23.
„ „ Reeve, Conch., Icon., pl. 12, sp. 47a, 47b.

*Hab.* Princess Charlotte Bay, North-East Australia, 14 fathoms, rough sand bottom, one specimen found; Cape Grenville, North-East Australia, 20 fathoms, sandy mud bottom, one specimen found. This is the variety figured by Reeve, 47b. *Terebra acuta* and *circinata* (Deshayes) are quite distinct both in colour, sculpture, and markings. Reeve is wrong in making them and *straminea* one species.

### 29.—TERERRA OCULATA.

*Terebra oculata*, Lam. Anim. Sans Vert., tome 7, p. 286.
„ *lœvis*, Gray, Proc. Zool. Soc., London, 1834 p. 61.
„ *oculata*, Sowerby, Thes. Conch., vol. 1, p. 156, pl. 42, f. 31.
„ „ Reeve, Conch. Icon., pl. 5, sp. 18.

*Hab.* Darnley Island, Torres Straits, found on the sands. One fine living specimen was obtained 9 inches long.

### 30.—TEREBRA COPULA.

*Terebra copula,* Hinds, Proc. Zool. Soc., 1843, p. 151.

„ „ Sowerby, Thes. Conch., vol. 1, p. 157, pl. 44, f. 76.

„ „ Reeve, Conch. Icon , pl. 19, sp. 92, a,b.

*Hab.* Hall Sound, New Guinea, on the sands at low water.

### 31.—TEREBRA (MYURELLA) UNDULATA.

*Terebra undulata,* Gray, Proc. Zool. Soc., London, 1834, p. 60.

„ „ Sowerby, Thes. Conch., vol. 1, p. 172, pl. 43, f. 55.

„ „ Reeve, Conch. Icon., pl. 18, fig. 84.

*Hab.* Darnley Island, Torres Straits, on the sands at the edge of low water.

### 32.—TEREBRA (MYURELLA) CŒLATA.

*Terebra cœlata,* Adams and Reeve, Moll. Voyage, Samarang, p. 30, pl 10, f. 22.

„ „ Reeve, Conch. Icon., pl. 15, sp. 64.

*Hab.* Darnley Island, Torres Straits, 20 fathoms, sandy mud bottom.

### 33.—TEREBRA (MYURELLA) CANCELLATA.

*Terebra cancellata,* Quoy and Gaimard, Voyage de l'Astrolabe, p. 471, pl. 36, f. 27, 28.

„ „ Sowerby, Thes. Conch., vol. 1, p. 178, pl. 44, fig. 80.

*Hab.* Cape Grenville, North-East Australia, 20 fathoms, sandy mud.

### 34.—TEREBRA (MYURELLA) COLUMELLARIS.

*Terebra columellaris,* Hinds, Proc. Zool. Soc., London, 1843, p. 151.

„ *areolata,* Adams and Reeve, Moll. Voy. Samarang, p. 30, pl. 10, fig. 23.

„ *columellaris,* Sowerby, Thes. Conch., Vol. 1, p. 172, pl. 44, f. 77.

„ „ Reeve, Conch. Icon., pl. 22, sp. 113.

*Hab.* Darnley Island, Torres Straits, 15 fathoms, white sand bottom.

### 35.—TEREBRA (MYURELLA) VIOLASCENS.

*Terebra violascens*, Hinds, Proc. Zool. Soc. London, 1843, p. 154.

„ „ Sow. Thes. Conch., vol. 1, p. 177, pl. 45, fig. 98.

„ „ Reeve, Conch. Icon., pl. 24, sp. 125.

*Hab.* Katow, New Guinea, sandy mud and fine coral, 8 fathoms. One specimen was obtained of this fine shell.

## FAMILY PYRAMIDELLIDÆ.

### 36.—PYRAMIDELLA AURIS-CATI.

*Voluta auris-cati*, Chem. Conch. fig. 1711, 1712.

*Pyramidella plicata*, Lam., Anim. Sans Vert., tome 6, p. 223.

„ *auris-cati*, Sowerby, Thes. Conch., vol. 2, p. 812, pl. 172, f. 1, 2.

*Hab.* Darnley Island, Torres Straits. Specimen found on the reef.

### 37.—PYRAMIDELLA SUBULATA.

*Pyramidella subulata*, A. Adams, Proc. Zool. Soc. 1853, p. 177, pl. 20, fig. 6.

„ „ Sowerby, Thes. Conch., vol. 2, p. 815, pl. 172, fig. 13.

*Hab.* Cape Grenville, North-East Australia, 15 fathoms, sand; Darnley Island, Torres Straits, 20, 30 fathoms, sandy mud. Four specimens were found.

### 38.—PYRAMIDELLA GRACILIS.

*Pyramidella gracilis*, A. Adams, Proc. Zool. Soc., London, 1853, p. 178.

„ „ Sowerby, Thes. Conch., vol. 2, p. 815, pl. 172, fig. 14, 15.

*Hab.* Darnley Island, Torres Straits, 30 fathoms, sand. One specimen found.

### 39.—OBELISCUS TEREBELLOIDES.

*Obeliscus terebelloides*, A. Adams, Sowerby, Thes. Conch., vol. 2, p. 808, pl. 171, f. 18.

*Pyramidella terebelloides*, Reeve, Conch. Icon., pl. 1, sp. 8.

*Hab.* Darnley Island, Torres Straits, 20, 30 fathoms, sandy mud.

### 40.—OBELISCUS TESSELLATUS.

*Obeliscus tessellatus*, A. Adams, Sowerby, Thes. Conch., vol. 2, p. 808, pl. 171, f. 16.

*Pyramidella tessellata*, Reeve, Conch. Icon., pl. 1, sp. 4 a, b.

*Hab.* Darnley Island, Torres Straits, 20, 30 fathoms, sandy mud.

### 41.—OBELISCUS PULCHELLUS.

*Obeliscus pulchellus*, A. Adams, Sowerby, Thes. Conch., vol. 2, p, 808, pl. 171, fig. 20.

*Pyramidella pulchella*, Reeve, Conch. Icon., pl. 4, sp. 24.

*Hab.* Cape York, North Australia, 6, 12 fathoms, sand bottom.

### 42.—OBELISCUS ACLIS.

*Obeliscus aclis*, A. Adams, Sowerby, Thes. Conch., vol. 1, p. 811, pl. 171, fig. 30.

*Pyramidella aclis*, Reeve, Conch. Icon., pl. 4, sp. 25 a, b.

*Hab.*—Darnley Island, Torres Straits, 30 fathoms, sandy mud.

### 43. –TURBONILLA DARNLEYENSIS, N. SP.

Shell elongated, turreted, white, transparent, longitudinally ribbed, ribs smooth, interstices between the ribs minutely latticed with raised striæ; whorls 16, flattened, suture impressed, last whorl below the periphery smooth and shining, slightly convex, aperture round, columella thickened, slightly curved, peristome thick.

Length 3½ lines, breadth ¾ line.

*Hab.* Darnley Island, Torres Straits, 30 fathoms, sandy mud bottom. Seven specimens were found of this species, only one perfect in the lot.

### 44.—TURBONILLA EXIMIA, N. SP.

Shell subulate, turreted, very thin, white, whorls 9, roundly convex, longitudinally prominently sharply ribbed, interstices smooth, suture deep, the last whorl in front crossed with transverse lines, below smooth, aperture small, somewhat squarely ovate, columella straight, peristome thin, little produced in the centre.

Length 2 lines, breadth ½ line.

*Hab.* Percy Island No. 2, North-East Australia, 18 fathoms, bottom of broken coral, rough sand, and stones.

### 45.—TURBONILLA, SP.?

*Hab.* Katow, New Guinea, 8 fathoms, mud bottom. Specimens very much seaworn and broken in the aperture.

### 46.—TURBONILLA, SP.?

*Hab.* Katow, New Guinea, 8 fathoms, mud bottom. One specimen was found, too much sea-worn for identification.

### 47.—TURBONILLA, SP.?

*Hab.* Darnley Island, Torres Straits, 20 fathoms, sandy mud. One sea-worn specimen found.

### 48.—TURBONILLA APLINI, N. SP.

Shell acutely elongated, thick, shining, white, spirally encircled with a pale yellowish broad band above the suture; longitudinally rather broadly ribbed, ribs 17 on the last whorl, interstices smooth, somewhat tabled at the suture, whorls 14-15 flattened, the last in front below the periphery smooth, columella minutely twisted, expanded below, aperture oblong ovate, outer lip nearly straight, thin, acute.

Length 3¾ lines, breadth ¾ line.

*Hab.* Katow, New Guinea, 8 fathoms, coral and mud bottom. Three specimens were obtained, but not in good condition.

### 49.—TURBONILLA CONFUSA, N. SP.

Shell elongated, somewhat cylindrical, thin, white, spirally encircled above the suture with a faint yellowish band (only seen with the lens), longitudinally ribbed, ribs 20 on the last whorl, narrow, rounded, interstices transversely latticed, whorls 9-11 flattened, the last in front spirally striated, convex, columella straight, aperture ovate, peristome thin above, thickened in the middle, expanded and reflected below.

Length, 3 lines, breadth ¾ line.

*Hab.* Darnley Island, Torres Straits, 20 fathoms, sandy mud.

### 50.—ODOSTOMIA, SP. ?

*Hab.* Darnley Island, Torres Straits, 20 fathoms, sand. Two specimens found sea-worn and broken in the aperture.

### 51.—ODOSTOMIA, SP. ?

*Hab.* Darnley Island, Torres Straits, 20 fathoms, sand. One specimen found dead and sea-worn.

### 52.—ODOSTOMIA, SP. ?

*Hab.* Darnley Island, Torres Straits, 20 fathoms sand. One specimen found dead and worn.

### 53.—ODOSTOMIA CLARA, N. SP.

Shell ovately conical, thickened, transparent, shining, white, whorls 7, slightly convex, suture deep, last whorl somewhat angled, aperture ovate, produced anteriorly, columella plait, transverse and small, peristome thin, simple, interior of aperture studded with 8 narrow distinct raised lines running spirally inwards.

Length, 3 lines, breadth 1¼ line.

*Hab.* Darnley Island, Torres Straits, 20, 30 fathoms, rough sand.

### 54.—ODOSTOMIA AFFINIS, N. SP. ?

Shell acuminately ovate, solid, smooth, white, whorls 7, flat, angulate at the sutures, faint keel above, spire lengthened, aperture oblong ovate, slightly produced anteriorly, columella with small narrow acute spiral plait; peristome thin, acute, interior of aperture furnished with 10 faint raised lines of striæ.

Length 2½ lines, breadth 1 line.

*Hab.* Cape York, North Australia, 11 fathoms, sandy mud bottom; Darnley Island, Torres Straits, 20, 30 fathoms, rough sand.

### 55.—ODOSTOMIA COMPTA, N. SP.

Shell elongate, very thin, smooth, transparent, white, whorls 8, slightly convex, last minutely keeled in the centre, angulate at the sutures, channelled, spire very much lengthened, aperture somewhat oblong, ovate, produced anteriorly, columella with strong thick transverse spiral plait, peristome thin, acute, interior of aperture near the edge granulated, furnished well down with 9 narrow, minute raised lines of striæ, interstices broad, minutely granulated.

Length 2½, breadth 1 line.

*Hab.* Darnley Island, Torres Straits, 20, 30 fathoms, sandy bottom.

### 56.—ODOSTOMIA POLITA, N. SP.

Shell elongate, thick, smooth, white, shining, whorls 6½, slightly convex, the last obsoletely keeled in the centre and contiguous to the suture; convex below, suture channelled, spire more than half the whole length, aperture roundly ovate, columella with strong oblique spiral plait; excavated behind, peristome thin above, thickened below, interior of aperture furnished from the edge of lip with 7 narrow sharp-edged lines of striæ, half-way down the striæ in the interstices are finer and transparent.

Length 2 lines, breadth ¾ lines.

*Hab.* Darnley Island, Torres Straits, 20, 30 fathoms, sandy bottom.

### 57.—ODOSTOMIA PARVULA, N. SP.

Shell acuminately ovate, rather thin, smooth, whitish, whorls 6, rather flat, the last small below the periphery, convex, sutures channelled, spire long, aperture oblong ovate, produced anteriorly, columella fold transverse, rather thick in the centre, thin at the edge, peristome thin, acute, interior of the aperture furnished with 7 narrow lines of striæ, interstices rough.

Length 1¾, breadth ¾ line.

*Hab.* Darnley Island, Torres Straits.

### 58.—SYRNOLA CINCTELLA.

*Syrnola cinctella*, A. Ad. Ann. Mag. Nat. Hist., 1860, vol. 6, 3 series, p. 33.

*Pyramidella cinctella*, Sowerby, Reeve, Conch., pl. 6, sp. 45.
*Hab.* Darnley Island, Torres Straits, 30 fathoms, sandy mud.

### 59.—SYRNOLA PULCHRA, N. SP.

Shell acutely elongated, rather thin, smooth, whitish, whorls 11, flat, the last convex, suture deep, spirally encircled with a light yellowish brown narrow band just above the suture, last whorl with obsolete band of the same colour entering spirally into the interior; aperture ovate, peristome thin, columella plait rather prominent and twisted outwardly, interior of aperture furnished halfway down with 4 white prominent lines of striæ, the upper one thickest.

Length 3 lines, breadth ½ line.

*Hab.* Darnley Island, Torres Straits, 30 fathoms, sandy mud; Cape York, North Australia, 11 fathoms, white sand.

Specimens from Cape York have only one band.

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## The ICHTHYOLOGY of the Chevert Expedition, by HAYNES GIBBES ALLEYNE, M.D., and WILLIAM MACLEAY, F.L.S.

During the voyage of the Chevert to New Guinea, no opportunity was lost by those on board of securing specimens of the fishes of the seas passed through. The result has been a collection of a most varied and interesting character, exceeding in point of number the collections made in those seas on any previous occasion.

It is our intention in this and succeeding Papers to give a list of these Fishes, with notes on their habits, localities, &c. The new species will be described and illustrated, and where previous descriptions have been imperfect, re-descriptions will be given of those previously named.

The labour attached to the task we have assigned ourselves is greater than will be generally believed, involving, as it does, the repeated examination of over a thousand fishes of all sizes, packed, some in bottles and some in large tanks, and with not a few very much injured and rendered difficult of recognition by the knocking about which they got on board ship when in insufficiently filled tanks.

The collection has been made exclusively on the Australian coast in the inner passage from Percy Island to Cape York, in New Guinea at Katow and Hall Sound, and in Torres Straits from Warrior Island on the West to Darnley Island on the East.

We adopt the divisions and arrangement given by Gunther in his celebrated Catalogue of the Fishes of the British Museum.

## ORDER 1.—ACANTHOPTERYGII.

### FAMILY PERCIDÆ.

### New Genus—PSEUDOLATES.

Seven branchiostegals. No pseudobranchiæ. Very fine villiform teeth on the jaws, vomer, palatine bones, and tongue. Two dorsals, the first with seven spines. The anal fin with three spines. Operculum with one spine. Præoperculum with strong spines at the angle and lower limb. Prœorbital finely serrated. Scales large.

### 1.—PSEUDOLATES CAVIFRONS.

*Plate III.*

D. $7\frac{1}{11}$, A. $\frac{3}{8}$.

Body rather compressed. Height four and a third times in the total length. Head, nearly three and a half in the same. Teeth, minute, uniform, feeling like fine sandpaper. Profile of head concave. Upper maxillary large, extending beyond the vertical from the posterior portion of the eye. Lower jaw longer than the upper. Distance between the eyes about equal to the diameter of the orbit. Præoperculum finely serrated on the posterior edge, with a strong spine at the angle, and three smaller spines on the lower limb. A flat acute spine on the upper part of the operculum. Coracoid with seven denticulations, the upper one indistinct. Pectoral fins small. ventrals with a very strong spine. The third spine of first dorsal very strong, and more than half the height of the body. Soft dorsal scaly at the base. Anal with the third spine much the longest, and the soft portion received into a scaly sheath. Caudal fin rounded. colour shining, brown on the back, pale beneath. Scales on the body very large and finely serrated.

One specimen of this fish was caught somewhere in Torres Straits or the coast of New Guinea, the exact locality is not known. It is two feet long, and nearly six inches deep. Its affinity to *Lates* is very marked ; in fact, but for the rough tongue and large scales, we would have taken it for *Lates nobilis* of Cuv. and Val. 2, p. 96, pl. 13.

### 2.—SERRANUS GILBERTI.

Rich. Ann. Nat. Hist., 1842, p. 19.
*Serranus megachir*, Rich. Ich. Chin. p. 230.
„ *pardalis*, Blecker, Perc., p. 37.

It is by no means easy to identify the species of this genus. They are numerous, they much resemble one another, and they have never, as we think, been very accurately described. The present species, more remarkable for the size of its pectoral fins than anything else, seems to have been found pretty generally from the latitude of Trinity Bay to Cape York.

### 3.—SERRANUS HEXAGONATUS.

*Serranus hexagonatus*, Cuv. and Val. 2, p. 330, and 6, p. 516; Guer. Icon. Poiss., pl. 4, f. 1 ; Rich. Voy. Sulph., p. 82, pl. 38, f. 1, &c., &c.

This species has a multiplicity of synonyms which we have curtailed very much as being unnecessary for reference. Gunther in his Catalogue makes out the species *foveatus* (Cuv. and Val.), *Merra* (Cuv. and Val.), and *stellans* (Rich.), to be synonymous with this, but doubts have been expressed as to the correctness of merging all these names in one.

We find that the references to Cuvier and Valenciennes Fishes, given by Gunther in his Catalogue, are quite different as to pages from the edition in our possession. We have, however, adhered to the references given by Gunther, as not improbably he may have taken them from an edition more generally in use than ours.

One specimen was taken at the Palm Islands.

### 4.—SERRANUS CRAPAO.

Cuv. and Val. 3, p. 494; Rich. Ann. Nat. Hist., 1842, p. 25.

This species was found in great abundance about the reefs of Long Island in Torres Straits.

### 5.—SERRANUS AUSTRALIS.

Casteln, Researches on Aust. Fishes, p. 7.

One specimen was taken at Darnley Island.

### 6.—SERRANUS FUSCOGUTTATUS.

Rüpp. Atl. Fisch., p. 108, t. 27, f. 2, Peters, Wiegm. Archiv. 1855, p. 235.

The only specimen in the collection of this fine species is from Cape Grenville.

### 7.—-SERRANUS ALATUS.

*Plate IV., fig.* 2.

D. $\frac{11}{16}$, A. $\frac{3}{8}$.

Head, more than a third of the total length. Diameter of the eye, one-fifth of the length of the head, and about equal to the space between the eyes, A small deep hollow between the eyes. Upper maxillary extending far beyond the vertical from the posterior part of the orbit. Præoperculum finely denticulated on the posterior limb, with a slight emargination above the angle. Operculum with the middle spine flat and acute, the upper invisible, and the lower small and acute. Caudal fin rounded. Pectoral very large, and extending to the vertical from the third anal spine. The head, back, and sides are closely covered with large brown, hexagonal spots, separated only by white lines, the spots becoming less crowded and distinct upon the under surface. On the dorsal fin the spots are large and divided by two longitudinal yellowish bands. The caudal fin is yellow, spotted with brown. The pectoral and anal fins are of a dark brown, with small spots of yellow. The head beneath and thorax are whitish, with broad brown bands.

One specimen, 12 inches long, of this handsome *Serranus* was captured at Hall Sound, New Guinea.

### 8.—Serranus carinatus.

*Plate IV. Fig. 3.*

D. $\frac{11}{17}$, A. $\frac{3}{8}$.

Oblong. Height of body less than one-fourth of the total length. Head, one-third of the same. Eye, four and a half times in the length of the head, and larger than the space between the eyes. Teeth fine. Intermaxillary very thin. Upper maxillary scarcely reaching to the vertical from the middle of the eye. Præoperculum irregularly denticulated, with a slight emargination above the angle. Operculum with the spines acute. A prominent curved ridge on the suboperculum near the angle of the præoperculum. Caudal fin rounded. Pectoral fins reaching to the extremity of the ventrals. Coloration in spirits pale, with large rounded or hexagonal brown spots, which are continued of about the same size on the dorsal fin, and of a less size on the caudal. The other fins are also spotted, but more indistinctly.

Two of this fish, eight inches long, were caught at Cape Grenville. It seems to resemble a good deal *Serranus Howlandi*, Gunth., Journ. Mus. Godeff. 3, p. 8, t. 9, f. B There are other *Serrani* in the collection which we have been unable satisfactorily to determine, either from the specimens being injured or immature.

### 9.—Plectropoma maculatum.

Cuv. and Val. 2, p. 393, ; Bleek. Jav., p. 39, &c.

*Bodianus maculatus*, Bloch, t. 288, Lacep. 4, pp. 280-293.

*Plectropoma punctatum*, Quoy and Gaim., Voy. Freyc, Zool. Poiss., p. 318, t. 45, f. 1.

„ *areolatum*, Rüpp. Atl., pp. 110-143.

The only specimen was caught at Fair Cape.

### 10.—Genyoroge Sebæ.

*Diacope Sebæ*, Cuv. and Val. 2, p. 310.

„ *Siamensis*, Cuv. and Val. 6, p. 524.

*Mesoprion Sebæ*, Bleek. Perc. p. 45.

Several large specimens of this fish were caught at the Percy Islands. The violet cross bands are scarcely traceable in the spirit specimens, and the general color is a faded yellow, but the fish when fresh caught is of a brilliant golden red.

### 11.—GENYOROGE UNICOLOR.

*Plate IV. Fig.* 1.

D. $\frac{11}{13\text{-}14}$, A. $\frac{3}{8\text{-}9}$.

Length of head equal to the height of the body, and nearly one-fourth of the total length. Diameter of orbit one fourth of the length of the head. Præoperculum finely serrated, with the notch small. Subopercular ridge bluntly acuminated. Soft dorsal and anal fins, not elevated behind, and somewhat rounded. Caudals forked. Colour, uniform pale red.

Two specimens were taken at the Percy Islands of about twelve inches in length. The shape of the soft dorsal and anal fins constitutes a very marked difference between this and the preceding species.

### 12.—MESOPRION WAIGIENSIS.

*Diacope Waigiensis,* Quoy and Gaim., Voy. Freyc, Zool., p. 307.
„ *immaculata,* Cuv. and Val. 2, p. 430.

One specimen from Cape Grenville.

### 13.—AMBASSIS PAPUENSIS.

*Plate V. Fig.* 4.

D. $7\frac{1}{9}$, A. $\frac{3}{9}$, P. 13.

The height of the body is one-third of the length without the caudal fin. Diameter of orbit nearly half the length of the head. Second dorsal spine almost as long as the head. Third spine of anal fin longest. Operculum unarmed. Infraorbital and double edge of præoperculum strongly denticulated, the teeth pointing backwards. Lateral line interrupted where it enters the median line. Colour, reddish yellow, with a silvery band on the median line and minute black dots along the black. A little black on the spinous dorsal and caudal fins. The latter is moderately forked. The procumbent spine in front of the dorsal fin is not visible.

This species was seen in dense shoals close to the southern shore of Hall Sound. Specimens were obtained by firing a charge of small shot into the thick of them. The wounded immediately came to the surface, and a few of the least injured were selected as specimens.

### 14.—Apogon fasciatus (*White*).

*Mullus fasciatus*, White, N. S. Wales, p. 268, f. 1.

*Apogon novem fasciatus*, Cuv. and Val. 2, p. 154, Bleek, Timor, 1 p. 163; Peters, Wiegm. Arch., 1855, p. 234.

„ *fasciatus*, Quoy and Gaim. Voy. Freyc, 2 vol., p. 344.

„ *Balinensis*, Bleek. Perc., p. 28, &c.

„ *Arubiensis*, Hombr. and Jacquin, Voy. au Pole Sud., Poiss., p. 31, pl. 1, f. 1.

*Apogon eudeka-tœnia*, Bleek, Banka, p. 449.

The specimens in the collection of this widely distributed species are from Cape Grenville and Darnley Island. They differ considerably, and it is not improbable that the Darnley Island fish may prove to be distinct.

### 15.—Apogon guttulatus.

*Plate V. Fig.* 1.

D. $7\frac{1}{8}$, A. $\frac{2}{8}$.

Height three and a half times in the total length. The third dorsal spine is the longest. Body silvery and speckled all over with minute black dots, with three longitudinal dark bands on each side—one from the top of the head to the termination of the soft dorsal fin; another, the largest, from the muzzle through the eye to the tail, the third from the suboperculum to the tail, marking the limits of a very silvery belly. The fins are whitish and very minutely speckled.

This fish was very numerous at Darnley Island, in holes in the rocks at low water. The average length is scarcely over an inch.

### 16. Apogonichthys Darnleyensis.

*Plate V. Fig.* 3.

D. $7\frac{1}{8}$, A. $\frac{2}{7}$, L. lat. 28.

Height two and a half times in the length of the body without the tail. Diameter of orbit, a little less than half the length of the head. Edge of orbit and double edge of prœoperculum punctured, and showing under the lens minute serrations. The third and fourth spines of the dorsal fin are of nearly equal length, and are longer than the others. The fifth and sixth rays of the soft dorsal, and the fourth, fifth, and sixth ot the anal fins are longest, Scales large and ciliated. Tail truncate. Coloration, yellowish brown, with darker cloudings. There is a black streak from the eye to the angle of the præoperculum, and a black spot at the upper posterior corner of the orbit. There is a dark mark on the operculum, but without a white edge. All the fins are blackish, with the exception of the pectorals, which are of a pale hue.

One specimen from Darnley Island.

### 17.—Apogonichthys marmoratus.

*Plate V. Fig.* 2.

D. $7\frac{1}{8}$, A. $\frac{2}{8}$.

Height of the body one-third of the total length. Muzzle rather prolonged. Cleft of mouth little oblique. Lateral line continued only to the commencement of the soft dorsal fin. Tail truncate. Coloration reddish yellow, transversely marbled with brown. There is a broad yellow patch on the præoperculum, and a large blue white-edged spot on the operculum. All the fins except the pectoral are marked with several small wavy fasciæ formed of minute spots.

Two specimens, Cape Grenville.

### New Genus—Homalogrystes.

Body oblong. Mouth large. Lower jaw longer than the upper. A broad band of acute, recurved, somewhat conical teeth in both jaws. A band of similar teeth on the vomer and palatine bomes. Two canines close together on each side of the upper jaw, in front.

Large conical teeth on the branchial arches and pharynx. Tongue smooth. Six branchiostegals. Operculum armed. Prœoperculum bluntly serrated and emarginate on the posterior edge. Eye moderate. Scales small. One dorsal fin with eleven spines. Caudal fin rounded.

### 18.—HOMALOGRYSTES GUNTHERI.

*Plate VI. Fig.* 3.

D. $\frac{11}{14}$, A. $\frac{3}{9}$, P. 17, C. 18.

Height three and a half times in the total length. Head three times in the same. Upper maxillary extending to the vertical from the middle of the eye. A space half an inch wide at the symphysis of both jaws almost without teeth. Operculum of a dense bony consistence, with two flat spines and a large convexity fitting the emargination of the præoperculum. Dorsal spines strong, and tolerably uniform in size. Colour, dark on the back and light on the belly, with scattered spots all over, like those of *Oligorus Macquariensis.*

This huge fish, measuring thirty-six inches in length, twenty-six in girth, and eight in width of mouth, was caught by the hook in six or seven fathoms of water, about twelve miles south of the New Guinea coast at Katow. The sea at that distance from the shore was of a muddy appearance, and palms and other trees were floating about in abundance, indicating the presence of a large quantity of fresh water.

There can be little doubt there is a great affinity in this fish to *Grystes.* In general aspect it resembles *Oligorus*, but its dentition and the number of its branchiostegals separate it from that genus. We have named the species after the distinguished author of the "Catalogue of the Fishes of the British Museum."

### 19.—ODONTONECTES ERYTHROGASTES (*Renard* 1, 32, 174).

*Cæsio erythrogaster*, Cuv. and Val. 6, p. 442, pl. 166; Bleek, Conch. Batav. Gensch. 23, Macniel, p. 9.

Two specimens of this handsome fish were taken at Fitzroy Island.

## FAMILY PRISTIPOMATIDŒ.

### 20.—THERAPON THERAPS.

Cuv. and Val. 3, p. 129, pl. 53; Bleek. Perc. p. 50; Rich. Ann. and mag. Nat. Hist., 1842, vol. 9, p. 126; Rüpp, Neue, Wirb. Fische, p. 95.

Found abundantly from Palm Islands to Flinders' Island.

### 21.—THERAPON SERVUS.

*Sciæna jarbua*, Forsk. descr. Anim,. p. 50; Shaw, Zool. 4, p. 541.

*Holocentrus servus*, Block, t. 238, f. 1.

„ *jarbua*, Lacep., pp. 348-355.

*Grammistes servus*, Bl. Schn., p. 185.

*Therapon Timoriensis*, Quoy and Gaim., Voy. Freyc, Poiss., p. 341.

*Therapon servus*, Cuv. and Val. 3, p. 125, and 7, p. 479; Bleeker Perc., p. 50; Rich. Ann. and Mag. Nat. Hist., 1842, vol. 9, p. 126; Rüpp. N. Wirb. Fische, p. 95.

*Pterapon trivittatus*, Gray, Ind. Zool, pl. —

Specimens were got at Cape York, and in Hall Sound, New Guinea.

### 22.—THERAPON CAUDOVITTATUS.

*Datnia caudovittata*, Rich. Voy. Ereb. and Terr., Fishes, p. 24, pl. 18, f. 3-5.

Found abundantly about Long Island in Torres Straits.

### 23.—PRISTIPOMA HASTA.

*Lutjanus hasta*, Bloch, t. 246, f. 1, Lacep. 4, p. 229.

*Labrus commersonii*, Lacep. 3, pp. 431-447, pl. 23, f. 1.

*Lutjanus microstoma*, Lacep. 3, pl. 34, f. 2.

*Pristipoma kakaan*, Cuv. and Val. 2, p. 244, &c.

„ *hasta*, Cuv. and Val. 5, p. 247, &c.

„ *commersonii*, Cuv. and Val. 5, p. 252, &c.

„ *chrysobalioa*, Cuv. and Val. 5, p. 248.

One specimen of this beautiful fish was taken in Hall Sound, New Guinea.

### 24.—DIAGRAMMA CRASSILABRE.

*Plate V. Fig.* 5.

D. $\frac{14}{16}$, A. $\frac{3}{7}$, P. 17, L. lat., about 60.

Height two and a half times in the total length. Length of head three and one-third times in the same. Profile convex. Eye large, and of a deep yellow. Space between the eyes more than the diameter of the orbit. Mouth small. Lips very fleshy. Posterior limb of præoperculum straight and deeply serrated. Operculum with two rather blunt points. Scales small, ctenoid. Dorsal fin deeply notched, the spinous portion partially received into a groove on the back, the spines strong—the fourth longest, the thirteenth and fourteenth short and equal. The middle rays of the soft dorsal longest, giving a rounded appearance to the fin posteriorly. Anal fin similarly shaped, but small, the second spine long and very strong. Both soft dorsal and anal fins scaly at the base. Pectorals small, not reaching to the extremity of the ventrals. caudal fin truncate. Colour entirely of a dark silvery grey, getting lighter on the belly, with the fins, front of the head before the eyes, and all parts not clothed with scales, of a blackish hue.

This fish seems to be very distinct from anything hitherto described, unless it may be the *Pristipoma nigrum* of Cuv. and Val. 5, p. 258, which is so imperfectly described as to be unrecognizable.

Two specimens, twelve inches and twenty inches long respectively, were taken at Hall Sound, New Guinea.

### 25.—SCOLOPSIS MARGARITIFER.

Cuv. and Val. 5, p. 337; Bleek., Verh. Batav. Genootsch. 23, Sciæn., p. 30.

One specimen, about ten inches long, was taken at Cape Grenville.

### 26.—SYNAGRIS FURCOSUS.

*Dentex furcosus,* Cuv. and Val. 6, p. 244.

This species was found everywhere along the coast from the Palm Islands to Cape Grenville.

### 27.—SYNAGRIS TÆNIOPTERUS.

*Dentex tæniopterus*, Cuv. and Val. 6, p. 246; Bleek. Verh. Batav. Gen. 23, p. 11.

Two specimens were caught off Cape Sidmouth.

### 28.—PENTAPUS PARADISEUS.

Gunth. Catal. 1, p. 383.

This beautiful fish was only seen at one place off Cape Sidmouth, but there it seemed to be abundant, and to take the hook readily.

Several specimens were captured.

### 29.—GERRES ABBREVIATUS.

Bleek. Jav. 1, p. 103, and Verh. Bat. Gen. 23, p. 11.

Two specimens, Cape Grenville.

### 30.—GERRES CHEVERTI.

*Plate VII. Fig.* 1.

D. $\frac{9}{10}$, A. $\frac{3}{7}$, L. lat. 40.

Height of body two-thirds of total length. Head, one-fourth of the same. Diameter of orbit, one-third of the length of the head. Body very compressed, forming an angle at its greatest elevation at the commencement of the dorsal fin, and sloping from thence steeply to the muzzle. The second dorsal spine is equal to half the height of the body. The second and third anal spines are about equal in length, the second being stoutest. Colour bright silvery, ventral and anal fins deep yellow, dorsal pale and tipped with black.

The only specimen in the collection of this very handsome species is marked as coming from Cape Grenville.

The length is four inches.

### 31.—GERRES LONGICAUDUS.

*Plate VII. Fig.* 2.

D. $\frac{9}{10}$, A. $\frac{3}{7}$, L. lat. 50.

Height of body three times in the total length. Length of head four times in the same. The second dorsal spine is half the height of the body. Summit of back rounded. Scales rather small. Scaly sheath of the fins small. The second and third anal spines equal. Colour moderately silvery. Fins pale—the caudal long, forked, and tipped with black; the dorsal blackish on the upper half.

Numerous about Cape Grenville. The average length of the specimens caught was about five inches.

### 32.—GERRES CARINATUS.

*Plate VII. Fig.* 4.

D. $\frac{9}{10}$, A. $\frac{3}{7}$, L. lat. about 35.

Height of body nearly four times in the total length. Head as long as the height of the body. The second dorsal spine slight, and more than half the height of the body. There is a straight median line below the lateral line, which is carinated near the operculum, and depressed towards the tail. The head is much foveated, and has a ridge on the summit extending from the intermaxillary groove to the commencement of the dorsal fin. The præoperculum has a double edge, the inner one slightly serrated. Colour, bright silvery, with numerous black spots irregularly disposed over the back and sides. Fins pale, the dorsal lightly tipped with black; the tail is long and forked, with a brownish mark at the base.

This very peculiar and well marked species comes from Darnley Island.

Two specimens were got, each about three inches long.

### 33.—GERRES BISPINOSUS.

*Plale VII. Fig.* 3.

D. $\frac{9}{10}$, A. $\frac{2}{8}$, L. lat. about 37.

Height of body three and a third times in the total length. The third dorsal spine slightly longer than the second and half the height of the body. A line below the lateral line from the upper part of the operculum to the tail, keeled on its anterior half and depressed on its posterior. Colour silvery, slightly reddish above the lateral line. Fins, pale yellow—the dorsal slightly tipped with black, the caudal widely forked, and reddish yellow at its base.

Two specimens from Hall Sound, New Guinea.

The absence of the third anal spine is peculiar. The fish is also more elongate than is usual in the genus.

The specimens are three inches long.

### NEW GENUS—GERREOMORPHA,

Characters of *Gerres*, but with ten dorsal spines.

### 34.—GERREOMORPHA ROSTRATA,

*Plate VIII. Fig.* 3.

D. $\frac{10}{9}$, A. $\frac{3}{8}$, L. lat. about 45.

Height of body one-third of the total length, of which the caudal fin forms one-fourth. Head one-fourth the total length. Diameter of orbit one-fourth the length of the head. First dorsal spine very short, the second strong—its length two and a half times in height of the body. Scaly sheath of the fins large, middle rays of pectoral fins elongate, reaching as far as the commencement of the anal. Snout appearing prominent, owing to the head being much hollowed out above and below. Colour brilliant silvery. Tips of dorsal and caudal fins black.

Only one specimen of this splendid fish was taken, and unfortunately the exact locality of its capture was not noted, but it was somewhere in Torres Straits. It is a very distinct and well marked species. We have been compelled to establish a new genus for it, for the single reason that the dorsal fin has ten spines, while one of the generic characters assigned to *Gerres* is that the dorsal fin has only nine spines.

The specimen is fourteen inches in length.

## FAMILY MULLIDÆ.

### 35.—UPENEUS MALABARICUS.

Cuv. and Val. 3, p. 467.

Two specimens from Cape Grenville, from eleven to twelve inches long.

We make the dorsal formula to be $7\frac{1}{8}$, not $\frac{8}{9}$ as given by Cuvier and Valenciennes.

### FAMILY SPARIDÆ.

### 36.—PACHYMETOPON SQUAMOSUM.

*Plate IX. Fig.* 1.

Form oval. Height of body at the extremity of the ventral fin two and a half times in the total length. Head, nearly five times in the same. Mouth small. Intermaxillary large, rounded above, and without scales. Upper maxillary reaching to the vertical from the posterior nostril, which is elongate. A convex transverse protuberance extends between the eyes, and in front of that the head is without scales. The eyes are rather large, of a yellow colour, and very distant. The præoperculum is entirely covered with scales, and is very slightly serrated on the angle, which is broadly rounded. Scales on lateral line, 58. Scales on body moderate. Pectoral, caudal, anal, and soft dorsal fins completely covered with minute scales The pectorals are short, not reaching to the middle of the ventrals. The caudal is broadly bilobed. The oft dorsal and anal fins are elevated, and vertical behind. Dorsal spines 11, short, received into a dorsal groove. Anal spines, 3, the third as much longer than the second as the second is longer than the first. Colour greenish olive, paler towards the belly, each scale with a light pearly centre, giving an appearance of many longitudinal lines.

*Pachymetopon grande*, the fish for which this genus was formed, is described by Gunther Cat. Brit. Mus. Fishes, vol. 1, p. 24, with great care, though from an old specimen and without a habitat. The present species from Hall Sound, New Guinea, is evidently very distinct. The fins are more completely covered with scales, so is the præoperculum ; the soft dorsal and anal fins are differently shaped; the pectoral fin is short, instead of elongate, and the coloration and form of the fish is different.

The specimen, which was speared by the natives, is about fourteen inches long, over five inches in height at the highest part—the vent, and is of considerable thickness.

### 37.—LETHRINUS NEMATACANTHUS.

Bleek. Japan, p. 403, and Verh. Batav. Genootsch. 26, p. 91, tab. 6.

Numerous along the coast at Cape Grenville and the Pipon Islands.

### 38.—LETHRINUS CHRYSOSTOMUS.

Rich. Voy. Ereb. and Terr., Ichthyol. p. 118, pl. 60, f. 6-7.

Found abundantly from the Percy Islands to Cape York.

### 39.—LETHRINUS LATICAUDIS.

*Plate VIII. Fig* 2.

Height of body two and a half times in the total length. Head four times in the same. Diameter of orbit much less than the distance between the eyes. Muzzle distant from the eye much more than two diameters of the orbit. Teeth rather small. Scales on the lateral line 47. Pectoral fin elongate. Caudal emarginate, widespread. Colour greenish olive, paler beneath, with an almost obsolete dark mark beneath the lateral line near the pectoral fin, and several very indistinct brown bands from the back to the belly, becoming more conspicuous towards the tail. The ventral, anal and dorsal fins brownish; the soft dorsal spotted.

One specimen was caught at the Percy Islands.

It is of an unusually deep compressed form, being four inches two lines in height to a total length of ten inches four lines.

### 40.—LETHRINUS PAPUENSIS.

*Plate VIII. Fig.* 1.

Height of body three and one-third times in the total length. head four times in the same. Diameter of orbit nearly one-third of the length of the head, and rather less than the space between the eyes. Snout rather narrow. Molar teeth distinct. Scales on lateral line, 48. Spines of dorsal fin feeble. Caudal fin emarginate. Colour dark olive on the back, becoming yellowish towards the belly, with a large obscure black spot below the lateral line, about the middle of the body.

One specimen of this very distinct species was got at Hall Sound, New Guinea. It seems to have most resemblance to *Lethrinus Banhamensis*, Gunth. Jour. Mus. Godeff., Heft. 7, pl. 47.

## FAMILY SQUAMIPINNES.

### 41.—HOLOCANTHUS SEXSTRIATUS.

Cuv. and Val. 7, p. 194; Bleek. Verh. Batav. Genootsch. 23, p. 25.

*Chætodon vorticosus*, Gronov. Syst. p. 74.

Several large specimens were taken near Cape Grenville.

### 42.—SCATOPHAGUS MULTIFASCIATUS.

Rich. Voy. Ereb. and Terr., Fishes, p. 57, pl. 35, f. 46.

Common at Cape York and Hall Sound.

### 43.—DREPANE PUNCTATA.

*Chætodon punctatus*, L. Gm., p. 1243, &c.
„ *longimanus*, Bl. Schn., p. 231.
„ *falcatus*, Lacep. 4, pp. 452-470, &c.
*Ephippus punctatus longimanus*, Cuv. Reg. Anims.
*Direpane punctata*, Cuv. and Val. 7, p. 132, pl. 179, &c.
„ *longimana*, Cuv. and Val. 7, p. 133, &c.
*Harpochirus punctatus* and *longimanus*, Cant. Catal. pp. 162-163.

Cape York, very abundant.

### 44.—SCORPIS VINOSA.

*Plate IX. Fig.* 2.

Height two and a half times in the total length. Snout small, rounded, convex, without scales, and with numerous punctures. Head naked on the forehead up to the eyes, and punctured. Space between the eyes wide and convex. Outer teeth in a single row, compressed and pointed. Upper maxillary scaly, extending nearly to a line with the middle of the eye. Præoperculum minutely serrated. Operculum emarginate below the angle. Scales small, those on the fins very small. Dorsal fin with ten spines, anal with three of nearly equal length; Soft dorsal and anal fins equal, rounded and nearly vertical behind, and so covered with scales as to make the number o the rays invisible. Caudal fin bilobed. Colour of an uniform opaque claret hue.

One specimen, 4 inches long, was taken at Darnley Island.

## FAMILY TRIGLIDÆ.

### 45.—SCORPÆNA BYNOENSIS.

Rich. Voy. Ereb. and Terr., Fishes, p. 22, pl. 14, f. 3-4.

Two specimens, Darnley Island.

### 46.—PTEROIS VOLITANS.

Seba, 3.28.1; Renard, Poiss., 1.6.41-143.215, &c.

*Gasterosteus volitans*, L. 1, p. 491.

*Scorpæna volitans*, L. Gm. 1 p. 119; Block., t. 184, &c.

*Scorpæna mahe*, Lacep. 3, p. 278.

*Pterois volitans*, Cuv. and Val. 4, p. 352, pl. 88; Bleek. Verh. Batav. Genoostch, 22, p. 8; Rüpp, N. W. Fische, p. 107.

One specimen, Hall Sound.

### 47.—TETRAROGE DARNLEYENSIS.

*Plate VI. Fig.* 1.

D. $\frac{13}{8}$, A. $\frac{3}{6}$.

Body compressed, oblong, without scales. Head large. Cleft of mouth oblique. Upper maxillary reaching to the vertical from the posterior third of the eye. Space between the eyes narrow and deeply grooved with two fine, partially converging ridges. Præorbital armed, with one of the spines, long, acute, and directed backwards. Præoperculum armed with several strong spines, the upper one long and acute; both operculum and præoperculum strongly keeled. Dorsal fin commencing above the eye. Pectorals large, spreading and reaching beyond the origin of the anal fin. Colour in spirits, yellowish, mixed and mottled with black.

One specimen from Darnley Island found in coral.

### 48.—PLATYCEPHALUS INSIDIATOR.

*Cottus insidiator*, Forsk., p. 25; L. Gm. 1, p. 1213; Shaw, Zool., &c.

*Callionymus indicus*, L. Gm. 1., p. 1153.

*Cottus spatulæ*, Bl. taf. 424.

*Platycephalus insidiator*, Bl. Schn., p. 59; Cuv. and Val. 4, p. 227; Rüpp, N. W. Fische, p. 102; Bleek. Verh. Batav. Gen. 22, p. 6;

Faun. Japon. Poiss., p. 39, pl. 15, f. 1 ; Cant. Catal. p. 37 ; Bl. Schn., p. 59, *P. spatula.*

*Batrachus indicus*, Bl. Schn., p. 43.

*Calliomorus indicus*, Lacep. 2, p. 343.

*Cottus Madagascariensis*, Lacep. 3, p. 48, t. 11. f. 1-2 ; Shaw Zool. 4, p. 261, pl. 37 ; Russell, pl. 46.

*Calliomorus chacca*, Buch. Ham. pp. 133-373.

*Platycephalus endrachtensis*, Quoy and Gaim., Voy. Freyc, Zool., p. 353 ; Cuv. and Val. 4, p. 240.

*Platycephalus chacca*, Gray, Zool. Ind. 2, pl. f. 2.

Taken at Capes Grenville and York.

### 49.—PLATYCEPHALUS ISACANTHUS.

Cuv. and Val. 4, p. 246 ; Cuv. Regn. Anim. Ill. Poiss. pl. 22, f. 3 ; Less. Voy. Coq., p. 214.

Single specimens were taken at the Palm Islands and Cape Grenville.

## FAMILY TRACHINIDÆ.

### 50.—SILLAGO CILIATA.

Cuv. and Val. 3, p. 415 ; Cuv. Regn. Anim. pl. 13, f. 2.

Abundant at Cape York. Found also at the Percy Islands.

### 51.—SILLAGO MACULATA.

Quoy and Gaim., Voy. Freyc. Zool. p. 261, pl. 53, f. 2.; Cuv. and Val. 3, p. 411 ; Bleek. Perc., p. 62, &c. &c.

One specimen was taken at No. 4 Island, Howick Group.

### 52.—SILLAGO GRACILIS.

*Plate VI. Fig.* 2.

D. $11\frac{1}{22}$, A. $\frac{1}{22}$.

Height of body six and a half times in the total length. Head about four times in the same. Colour brilliant yellowish red, with a lateral silvery band, and three rows of distant black spots—one on the silvery band, one between that and the back, and one on the summit of the back. Fins pale, unspotted. Caudal truncate.

Two specimens were taken either at Darnley Island or Hall Sound, most probably the latter.

They are both about the same length, three inches.

### 53.—OPISTHOGNATHUS MACULATUS.

*Plate IX. Fig.* 3.

D. 25, A. 16.

Height of body nearly six times in the total length. Head three and one-third times in the same. Space between the eyes less than one-fourth of the diameter of the orbit. The upper maxillary reaches nearly to the angle of the præoperculum. The lateral line takes its rise above the operculum, and extends near and parallel to the dorsal fin to within an inch of the tail. Colour brownish red above, paler beneath, and marked all over with scattered black or deep brown spots—those on the head and pectoral fins small, those on the body and dorsal fin of various sizes. Anal fin with three spots and a black margin ; caudal fin rounded. The ventral fins are ill-developed, and somewhat blenniform.

One specimen, seven inches long, of this curious fish was got at Palm Island.

## FAMILY SPHYRÆNIDÆ.

### 54.—SPHYRÆNA FORSTERI.

Cuv. and Val. 3, p. 353, and 7, p. 509 ; Bleek. Jav. 2, p. 424, and Sphyr. p. 13.

One specimen, thirteen inches long, from Hall Sound, New Guinea.

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## *EXPLANATION OF PLATES.*

### *Plate III.*

*Pseudolates cavifrons,* ¼ *nat. size.*

### *Plate IV.*

1. *Genyoroge unicolor,* ⅓ *nat. size.*
2. *Serranus alatus,* ⅓ *nat. size.*
3. *Serranus carinatus,* ½ *nat. size.*

*Plate V.*

1. *Apogon guttulatus, nat. size.*
2. *Apogonicthys marmoratus, nat. size.*
3. ,, *Darnleyensis, nat size.*
4. *Ambassis Papuensis, nat size.*
5. *Diagramma crassilabre,* ¼ *nat. size.*

*Plate VI.*

1. *Tetraroge Darnleyensis, nat. size.*
2. *Sillago gracilis, nat. size.*
3. *Homalogrystes Guntheri,* 1/6 *nat. size.*

*Plate VII.*

1. *Gerres Cheverti, nat. size.*
2. ,, *longicaudis,* 4/5 *nat. size.*
3. ,, *bispinosus, nat. size.*
4. ,, *carinatus, nat. size.*

*Plate VIII.*

1. *Lethrinus Papuensis,* ½ *nat. size.*
2. ,, *laticaudis,* ⅓ *nat. size.*
3. *Gerreomorpha rostrata* ⅔ *in nat. size.*

*Plate IX.*

1. *Pachymetopon squamosum, about* ⅓ *nat. size.*
2. *Scorpis vinosa, nearly nat. size.*
3. *Opisthognathus maculatus, over* ½ *nat. size.*

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## Note on Poëphila Gouldiæ, by E. PIERSON RAMSAY, F.L.S., Curator of the Australian Museum.

Since my last remarks on this species I have received a letter from my friend, Mr. Armitt, of Queensland, who informs me that the male of the bird I exhibited at our last meeting *had a red head and a long pointed tail.* Mr. Armitt also informed me that they had built a nest near his camp, so he had frequent opportunities of watching the birds, and they were the only pair of the kind he had up to that time met with.

I am fully convinced that the female of *Poëphila mirabilis* has been described by Mr. Gould as *P. Gouldiæ.* The fact of the birds with black heads and more highly colored breasts being found breeding with similar but less brightly tinted females does not prove that they are a distinct species, but is easily accounted for if we remember that many birds are found breeding before they attain the fully adult plumage; and I have no doubt further investigation into this matter will prove that the *young males* retain the plumage of the *adult female* for a considerable period before obtaining the *red* heads which characterise the *fully adult males.* It is much to be regretted that the name bestowed on this beautiful finch, by Mr. Gould, in honour of his talented and departed wife, must sink into a synonym. The name of *Poëphila mirabilis*, that previously employed, and originally given to these birds by Messrs. Hombron and Jacquinot must be resumed, and *Poëphila Gouldiæ* must in future be recognised as the female of *P. mirabilis* of Hombron and Jacquinot.

## MONDAY, 30TH OCTOBER, 1876.

WILLIAM MACLEAY, ESQ., F.L.S., President, in the Chair.

Mr. BRAZIER exhibited a number of eggs of a Porphyrio, from the Loyalty Islands, which he had had in confinement for some years. The bird had been in the habit of laying these eggs at short intervals for some time. They were remarkable for their variety of marking.

The following papers were read :—

Continuation of the Mollusca of the Chevert Expedition, with new species—by JOHN BRAZIER, C.M.Z.S., Cor. Mem. Roy. Soc. Tas.

### FAMILY EULIMIDÆ.

#### I.—EULIMA GRANDIS.

*Eulima grandis,* A. Adams, Sowerby, Thes. Conch. vol. 2, p. 797, pl. 169, fig. 24.

*Hab.* Darnley Island, Torres Straits, 30 fathoms, white sand bottom. Cape Grenville, North East Australia, 20 fathoms, sandy mud.

#### 2.—EULIMA MARTINI.

*Eulima Martini,* A. Ad., Sowerby, Thes. Conch., vol. 2, p. 795, pl. 169, fig. 5.

*Hab.* Darnley Island, Torres Straits, 20 fathoms.

#### 3.—EULIMA CUSPIDATA.

*Eulima cuspidata,* A. Ad., Sowerby, Thes. Conch., vol. 2, p. 797, pl. 169, fig. 33.

*Hab.* Barnard Islands, No. 3., North East Australia; found under coral.

#### 4.—EULIMA VITREA.

*Eulima vitrea,* A. Ad., Sowerby, Thes. Conch., vol. 2, p. 799, pl. 169, fig. 35.

*Hab.* Palm Island, North East Australia, 10 fathoms, sandy mud bottom. Darnley Island, Torres Straits, 20 fathoms, sandy bottom.

### 5.—EULIMA ACUTA.

*Eulima acuta,* Sowerby, Proc. Zool. Soc., London, 1834, p. 8.
„ „ „ Thes. Conch., vol. 2, p. 797, pl. 169, fig. 29, 30.

*Hab.* Cape Grenville, North East Australia, 15 fathoms, sandy mud bottom. Warrior Reef, West side Torres Straits, 8 fathoms, mud. Darnley Island, 30 fathoms, white sand.

### 6.—EULIMA MODICELLA.

*Eulima modicella,* A. Ad., Sowerby, Thes. Conch., vol. 2, p. 798, pl. 169, fig. 27, 28.

*Hab.* Darnley Island, Torres Straits, 20 to 30 fathoms.

### 7—EULIMA SP, ?

*Hab.* Katow, New Guinea, 10 fathoms, mud bottom. This species comes near to *E. modicella.* Specimens dead and sea worn.

### 8.—EULIMA BREVIS.

*Eulima brevis,* Sowerby, Proc. Zool. Soc., 1834, p. 7.
„ „ „ Thes. Conch., vol. 2, pl. 169, fig. 32.

*Hab.* Darnley Island, Torres Straits, 15 fathoms, sandy mud bottom.

### 9.—EULIMA LACTEA.

*Eulima lactea,* A. Adams, Sowerby, Thes. Conch., vol. 2, p. 799, pl. 169, fig. 2.

*Hab.* Darnley Island, Torres Straits.

### 10.—EULIMA POLYGYRA.

*Eulima polygyra,* A. Adams, Sowerby, Thes. Conch., vol. 2, p. 799, pl. 169, fig. 36.

*Hab.* Katow, New Guinea, sandy mud bottom, 8 fathoms.

### 11.—EULIMA ACICULA.

*Stylifer acicula,* Gould, Exped. Shells.

*Hab.* Darnley Island, Torres Straits, 20 fathoms, found on the back of a species of *Asterias.*

### 12.—EULIMA TORTUOSA.

*Eulima tortuosa*, Adams and Reeve, Zool. Voy. Samarang Moll., p. 53, pl. 11, fig. 26.

*Hab.* Darnley Island, Torres Straits, 20 fathoms, sand bottom.

### 13.—EULIMA NITENS. N. SP.

**Shell acuminated, pyramidal, slightly distorted at the upper part, whorls 12-14, nearly flat, suture with a rather broad margin, varix on the right side, opaque white, last whorl large and somewhat ventricose, roundly convex, aperture ovate, the inner or columella margin thickened, outer thin, simple. Length, 3½ lines; breadth, 1¼ line.**

*Hab.* Darnley Island, Torres Straits, 20 fathoms, sand bottom.

### 14.—EULIMA AMABILIS. N. SP.

**Shell subulately pyramidal, opaque white, polished, solid, somewhat straight, whorls 10, convex, slight varix on the first and second whorl right side, suture distinct, spire straight, aperture oblong ovate, columella thickened, produced below, outer lip very much thickened in the centre, thin at the edge. Length, 4½ lines; breadth, 1¾ line.**

*Hab.* Darnley Island, Torres Straits, 20 fathoms, sand bottom.

### 15.—LEIOSTRACA BIVITTATA.

*Eulima bilineata*, Adams and Reeve, Zool. Voy. Samarang, Moll., p. 52, pl. 11, fig. 24.

*Leiostraca bivittata*, H. and A. Adams, Genera of Recent Mollusca, vol. 1, p. 238.

*Leiostraca bivittata*, Sowerby, Thes. Conch., vol. 2, p. 804, pl. 170, fig. 18, 19.

*Hab.* Darnley Island, Torres Straits, 30 fathoms, sand. Specimen dead, 7½ lines long.

## FAMILY STYLIFERIDÆ.

### 16.—STILIFER ASTERICOLA ?

*Stilifer Astericola*, Broderip, Proc. Zool. Soc. London, 1832, p. 60.

*Hab.* Darnley Island, Torres Straits, 20 fathoms. Specimens in a bad state of preservation.

### FAMILY ARCHITECTONICIDÆ.

#### 17.—ARCHITECTONICA PURPURATA.

*Solarium purpuratum*, Hinds, Proc. Zool. Soc. London, 1844, p. 25.

„ „ Sowerby, Thes. Conch., vol. 3, p. 232, pl. 1, fig. 7, 8.

„ „ Reeve, Conch. Icon., pl. 1, sp. 5.

*Hab.* Katow, New Guinea; found on sandy mud flats at low water.

#### 18.—TORINIA STRAMINEA.

*Trochus stramineus*, Chemnitz, 5 t., 172, fig. 1699.

*Solarium stramineum*, Lam. Anim. Sans Vert., Tome 7, p. 4.

„ „ Sowerby, Thes. Conch., vol. 3, p. 242, pl. 5, fig. 95.

„ „ (Torinia) Chenu., Manuel de Conch., p. 232, fig. 1353.

*Hab.* Darnley Island, Torres Straits, 30 fathoms, sand bottom.

#### 19.—TORINIA DORSUOSUA.

*Solarium dorsuosum*, Hinds, Proc. Zool. Soc., 1844, p. 23.

„ „ Sow., Thes. Conch., vol. 3, p. 228, pl. 5, fig. 73, 74.

*Hab.* Darnley Island, Torres Straits, 25 fathoms, sandy mud bottom.

#### 20.—TORINIA CÆLATA.

*Solarium cœlatum*, Hinds, Proc. Zool. Soc. London, 1844, p. 25.

„ „ Sowerby, Thes. Conch., vol. 3, p. 240, pl. 5, fig. 75, 76.

*Hab.* Cape Grenville, North East Australia, 20 fathoms, mud. Darnley Island, Torres Straits, 30 fathoms, sand bottom.

### 21.—TORINIA FENESTRATA.

*Solarium fenestratum*, Hinds, Proc. Zool. Soc. London, 1844, p. 25.

„ „ Sowerby, Thes. Conch., vol. 3, p. 241, pl. 5, fig. 79, 80.

*Hab.* Katow, New Guinea, 8 fathoms, sandy mud bottom.

## SUB-ORDER TOXIFERA.

## FAMILY CONIDÆ.

### 22.—CONUS MARMOREUS.

*Conus marmoreus*, Linnæus. Gmel., p. 3374, No. 1.

„ „ Lam. Anim. Sans Vert. tome 7, p. 442.

„ „ Sowerby, Thes. Conch. Vol. 3, p. 2, Conus, pl. 1, fig. 5.

*Hab.* Palm Island, North-east Australia; Darnley Island, Torres Straits, found on the reefs.

### 23.—CORONAXIS NANUS.

*Conus nanus*, Broderip, Proc. Zool. Soc. London, 1833, p. 53.

„ „ Reeve, Conch. Icon., 1843, pl. 27, sp. 150.

„ „ Sowerby, Thes. Conch., vol. 3, p. 11, Conus, pl. 6, fig. 114, 115, 116.

*Hab.* Darnley Island, Torres Straits; found on the reefs under coral.

### 24.—CORONAXIS MUSICUS.

*Conus musicus*, Brug. Dict., No. 25.

„ „ Lam. Anim. Sans Vert., tome 7, p. 456.

„ „ Reeve, Conch. Icon., 1843, pl. 20, sp. 113.

„ „ Sowerby, Thes. Conch., vol. 3, p. 11, pl. 6, fig. 148.

*Hab.* Darnley Island, Torres Straits; found on the reefs under coral.

### 25.—LITHOCONUS SUTURATUS.

*Conus suturatus*, Reeve, Proc. Zool. Soc., London, 1843, p. 178.

„ „ „ Conch. Icon. 1844, pl. 45, sp. 250, Suppl. pl. 3, fig. 250 b.

*Conus saturatus*, Sowerby, Thes. Conch., vol. 3, p. 25, Conus, pl. 12, fig. 256.

*Hab.* Cape Grenville, North-East Australia, 20 fathoms, sandy mud.

### 26.—LITHOCONUS FLAVIDUS.

*Conus flavidus*, Lam. Anim. Sans Vert., tome 7, p. 468.
„ „ Reeve, Conch. Icon., pl. 38, sp. 207.
„ „ Sowerby, Thes. Conch., vol. 3, p. 23, Conus, pl. 8, fig. 168.

*Hab.* Darnley Island, Torres Straits, found on the reefs under coral; Hall Sound, New Guinea, one sea-worn specimen found.

The specimen figured by Reeve comes from the Central Pacific. The one figured by Sowerby comes from the Philippine Islands. The specimens found in Torres Straits are of a fine yellowish brown, transversely faintly striated with fine dark brown thread-like lines very much like *Conus figulinus*; interior of the aperture dark violet above and below centre, with a white narrow band.

### 27.—LITHOCONUS EMACIATUS.

*Conus emaciatus*, Reeve, Conch. Icon. 1849, supp., pl. 5, sp. 248.
„ „ Sowerby, Thes. Conch., vol. 3, p. 23, Conus, pl. 10, fig. 214, pl. 12, fig. 258.

*Hab.* Darnley Island, Torres Straits, found on the reefs under stones.

### 28.—LITHOCONUS PEASEI.

*Conus neglectus*, Pease, Proc. Zool. Soc., London, 1860, p. 398.
„ „ „ American Journal of Conchology, 1869, vol. 5, p. 87.

*Hab.* Darnley Island, Torres Straits, found on the reefs under coral. This species differs from *Conus flavidus*, Lam., by being flat spired; aperture narrow, contracted in the centre like *C. emaciatus* (Reeve); edge of the lip bright orange, interior with large deep purple spots; epidermis thicker and rougher than specimens of *C. flavidus*. Mr. A. Adams described in the Proc. Zool. Soc., London, 1853, another species under the same name; I have therefore changed the specific name as above.

### 29.—LEPTOCONUS PRÆCELLENS.

*Conus præcellens*, A. Adams, Proc. Zool. Soc., 1853, p. 119.
„ „ Sowerby, Thes. Conch., vol. 3, p. 12, Conus, pl. 16, fig. 371.

*Hab.* Darnley Island, Torres Straits, 25 fathoms, sandy bottom.

### 30.—LEPTOCONUS ACULEIFORMIS.

*Connus aculeiformis*, Reeve, Conch. Icon., pl. 44, sp. 240.
„ „ „ Proc. Zool. Soc. London, 1843, p. 176.
„ „ Sowerby, Thes. Conch., vol. 3, p. 12, Conus, pl. 16, fig. 370.

*Hab.* Cape Grenville, North Australia, 15 fathoms, mud bottom; Darnley Island, Torres Straits, 25-30 fathoms, sandy mud.

### 31.—RHIZOCONUS CAPITANEUS.

*Conus capitaneus*, Linnæus Syst. Nat., p. 3376, No. 6.
„ „ Sowerby, Thes. Conch., vol. 3, p. 27, Conus, pl. 8, fig. 175.

*Hab.* Darnley Island, Torres Straits, found on the reefs; Hall Sound, New Guinea.

### 32.—CHELYCONUS DESHAYESI.

*Conus Deshayesi*, Reeve, Proc. Zool. Soc., London, 1843, p. 168.
„ „ „ Conch. Icon., pl. 5, sp. 28, a,b.
„ „ Sowerby, Thes. Conch., vol. 3, p. 40, Conus, pl. 22, fig. 546.

*Hab.* Palm Island, North-East Australia; found on mud flats inside the reefs.

### 33.—CHELYCONUS SPECTRUM.

*Conus spectrum*, Linn. Gmel. p. 3395.
„ „ Reeve, Conch. Icon., pl, 15, sp. 80 a.
„ „ Sowerby, Thes. Conch., vol. 3, pl. Conus, fig. 458.

*Hab.* Palm Island, North-East Australia; found on sand flats.

### 34.—CHELYCONUS STRIATUS.

*Conus striatus*, Linn. Gmel., p. 3393, No. 58.
" " Reeve, Conch. Icon., pl. 32, sp. 179 a,b.
" " Sowerby, Thes. Conch., vol. 3, p. 39, Conus, pl. 23, fig. 557.

*Hab*, Darnley Island, Torres Straits, found on the reefs.

### 35.—CHELYCONUS CINCTUS.

*Conus cinctus*, Swainson, Zool. Ill. 2nd. ser. pl. 110.
" " Reeve, Conch. Icon., pl. 23, fig. 53, b.
" " Sowerby, Thes. Conch., vol. 3, p. 36, Conus, pl. 10, fig. 231.

*Hab.* Brooke Island, North-East Australia; one specimen on beach.

### 36.—CHELYCONUS MAGUS.

*Conus magus*, Linn. Syst. Nat. 2, p. 1171, No. 317.
" " Lam. Anim. Sans Vert., tome 7, p. 509.
" " Sowerby, Thes. Conch., vol. 3, p. 38, Conus, pl., fig. 510, 511, 512.

*Hab.* Darnley Island, Torres Straits; found on the reefs under coral.

### 37.—CHELYCONUS CONSUL.

*Conus consul*, Boivini Journal de Conch. 1864, vol. 12, 3rd series, p. 33, pl. 1, fig. 5, 6.

*Conus magus*, Reeve, not Linn. Conch. Icon., pl. 35, sp. 190 e.
" *consul*, Sowerby, Thes. Conch., vol. 3, p. 330, Conus, pl. 21, fig. 509.

*Hab.* Darnley Island, Torres Straits, on the reefs under coral.

### 38.—CHELYCONUS CIRCÆ.

*Conus circæ*, Chemn. Conch. 11, t. 183, f. 1778, 1779.
" " Sowerby, Thes. Conch., vol. 3, p. 39, Conus, pl. 21, fig. 513.

*Hab.* Darnley Island, Torres Straits.

### 39.—CYLINDER TEXTILE.

*Conus textile*, Linn. Gmel., p. 3393, No. 59.

„ „ Sowerby, Thes. Conch. vol. 3, p. 41, Conus, pl. 23, fig. 567.

*Hab.* Low Islands, Trinity Bay, North-East Australia ; Darnley Island, Torres Straits.

### 40.—CYLINDER OMARIA.

*Conus omaria*, Brug., Dict., No. 137.

„ „ Lam. Anim. Sans Vert., tome 7, p. 518.

„ „ Reeve, Conch. Icon., pl. 32, sp. 177c.

„ „ Sowerby, Thes. Conch., vol. 3, p. 44, Conus, pl. 24, fig. 594, 595.

*Hab.* Darnley Island, Torres Straits, on the reefs under coral.

### 41.—HERMES TEREBELLUM.

*Conus terebellum*, Martini, Conch., vol. 2, pl. 52, fig. 577.

„ *terebra*, Lam. Anim. Sans Vert., tome 7, p. 508.

„ *terebellum*, Gmel., p. 3390, No. 44.

„ „ Reeve, Conch. Icon., pl. 7, sp. 38.

„ *cœlebs.* Hinds, Ann. and Mag. Nat. History, 1843, p.

„ „ Reeve, Conch. Icon., pl. 13, fig. 64.

„ *terebellum*, Sowerby, Thes. Conch., vol. 3, p. 46, Conus, pl. 23, fig. 559.

*Hab.* Darnley Island, Torres Straits ; on the reefs, under coral.

### 42.—HERMES NUSSATELLATA.

*Conus nüssatellata*, Linn. Gmel., p. 3390, No. 43.

„ „ Lam. Anim. Sans Vert., tome 7, p. 515.

„ „ Reeve, Conch. Icon., pl. 11, sp. 56.

„ „ Sowerby, Thes. Conch., vol. 3, p. 45, Conus, pl. 23, fig. 553.

„ *terebra*, Chemn. Conch., 10, t. 143, fig. 1329.

*Hab.* Brooke Island, North-East Australia.

### 43.—HERMES TENUISTRIATUS.

*Conus tenuistriatus*, Sowerby, Thes. Conch., vol. 3, p. 46, sp. 396, pl. 22, fig. 532.

*Hab.* Barnard Islands, No. 3, North-East Australia, under coral. The striæ of this species are much finer than in *Conus glans*, Brug., and scarcely granulated, spire smooth.

### SUB-ORDER ROSTRIFERA.

### FAMILY STROMBIDÆ.

### SUB-FAMILY STROMBINÆ.

### 44.—STROMBUS (MONODACTYLUS) LAMARCKI.

*Strombus Lamarcki*, Gray. Sowerby, Thes. Conch., vol. 1, p. 35, pl. 9, fig. 98, 99, 88, 93.

*Hab.* Darnley Island, Torres Straits; found on sandy mud flats at half-tide.

### 45.—GALLINULA CANARIUM.

*Strombus canarium*, Linn. Gmel., p. 3517, No. 24.

„ „ Lam. Anim. Sans Vert., tome 7, p. 206.

„ „ Sowerby, Thes. Conch., vol. 1, p. 33, pl. 8, fig. 69, 70.

*Hab.* Katow and Hall Sound, New Guinea.

### 46.—GALLINULA VARIABLIS.

*Strombus variablis*, Swainson. Sowerby, Thes. Conch., vol. 1, p. 27, pl. 6, fig. 13, 14.

*Hab.* Darnley Island, Torres Straits.

### 47.—GALLINULA COLUMBA.

*Strombus columba*, Lam. Anim. Sans Vert., tome 7, p. 208.

„ „ Sowerby, Thes. Conch., vol. 1, p. 27, pl. 6, fig. 2, 3, 6, 7.

*Hab.* Darnley Island, Torres Straits, 25 fathoms; white sandy mud bottom.

### 48.—GALLINULA CAMPBELLI.

*Strombus Campbelli*, Gray, Griffiths, Cuvier, Anim. Kingdom Moll,, pl. 25.

„ *Campbelli*, Sowerby, Thes. Conch., vol. 1, p. 26, pl. 6, fig. 22, 23.

„ „ Chenu. Manuel de Conch., p. 257, fig. 1600.

*Hab.* Cape Grenville, North-East Australia, 15 fathoms; soft mud bottom. Long Island, Torres Straits.

### 49.—GALLINULA VITTATUS.

*Strombus vittatus*, Linn. Gmel., p. 3517, No. 25.
„ „ Lam. Anim. Sans Vert., tome 7, p. 207.
„ „ Sowerby, Thes. Conch., vol. 1, p. 26, pl. 6, fig. 29, 30.
„ „ Chenu. Manuel de Conch., p. 257, fig. 1597, 1601.

*Hab.* Cape Grenville, North-East Australia, 25 fathoms, with *Gallinula Campbelli.*

### 50.—CANERIUM LUHUANUS.

*Strombus luhuanus*, Linn. Gmel., p. 3513, No. 16.
„ „ Lam. Anim. Sans Vert., tome 7, p. 206.
„ „ Sowerby, Thes. Conch., vol. 1, p. 29, pl. 7, fig. 54.

*Hab.* Darnley Island, Torres Straits, on mud flats inside the reefs.

### 51.—CANARIUM DENTATUS.

*Strombus dentatus*, Linn. Gmel., p. 3519, No. 31.
„ *plicatus*, Lam. Anim. Sans Vert., tome 7, p. 210.
„ „ Sowerby, Thes. Conch., vol. 1, p. 30, pl. 7, fig. 56.

*Hab.* Palm Island and Home Islands off Cape Grenville, North-East Australia; found on the reefs. Darnley Island, Torres Straits; found on mud flats inside the reefs, and at 15, 20, 30 fathoms, sandy mud bottom.

### 52.—CANARIUM ELEGANS.

*Strombus elegans*, Sowerby, Thes. Conch., vol. 1, p. 3, pl. 6, fig. 43, 48.
„ „ Reeve. Conch. Icon., pl. 17, sp. 41, a. b.

*Hab.* Darnley Island, Torres Straits, 15, 20, 30 fathoms, sandy mud bottom.

### 53.—PTEROCERA BRYONIA.

*Strombus radix-bryonia*, Chem. Conch., Cab. 10, p. 227, pl. 159, fig. 1512-15.

„ *bryonia*, Gmel. in Linn. Syst. Nat., ed. 13, p. 3520.

*Pterocera truncata*, Lam. Anim. Sans Vert., tome 7, p. 195.

*Strombus truncatus*, Dillwyn, Cat. 2, p. 659.

*Pteroceras truncatum*, Sowerby, Thes. Conch., vol. 1, p. 41, pl. 11, fig. 13.

*Heptadactylus radix-bryonia*, Adams, Genera. Rec. Moll., vol. 1, p. 261.

*Pterocera bryonia*, Reeve, Conch. Icon., sp. 1.

*Hab.* Darnley Island, Torres Straits; found on the reefs. This is the largest species of the genus; specimens found are over a foot in length.

### 54.—PTEROCERA LAMBIS.

*Strombus lambis*, Linn. Syst. Nat., ed. 12, p. 1208.

*Pterocera lambis*, Lam. Anim. Sans Vert., tome 7, p. 196.

*Pteroceras lambis*, Sowerby, Thes. Conch., vol. 1, p. 41, fig. 5, 6, 7.

*eptadactylus lambis*, Adams, Genera. Rec. Moll., vol. 1, p. 261.

*Harpago lambis*, Adams, Genera. Rec. Moll., vol. 3, Atlas, pl. 27, fig. 2.

*Pterocera lambis*, Reeve, Conch. Icon., sp. 8.

*Hab.* Darnley Island, Torres Straits; found on the reefs.

### 55.—TEREBELLUM SUBULATUM.

*Terebellum subulatum*, Lam. Anim. Sans Vert., tome 7, p. 410.

*Bulla terebellum*, Burrow, Elem. Conch., 1825, pl. 14, fig. 8.

*Terebellum subulatum*, Sowerby, Sp. Conch., vol. 1, part 2, pl. 1, fig. 1 to 7.

*Terebellum punctatum*, Chem. Conch., 10, t. 146, fig. 1362, 1363.

*Hab.* Cape Grenville, North-East Australia, 20 fathoms, sandy mud bottom. Darnley Island, Torres Straits, 5, 10, 20, 30 fathoms, sand and sandy mud bottom, all varieties found.

## FAMILY CYPRÆIDÆ.

### 56.—CYPRÆA ISABELLA.

*Cypræa isabella*, Linn. Gmel., p. 3409, No. 49.
„ „ Reeve, Conch. Icon., pl. 12, sp. 51.
„ „ Sowerby, Thes. Conch., vol. 4, p. 6, pl. 4, fig. 16, 17, 18.

*Hab.* Darnley Island, Torres Straits; found on the reefs.

### 57.—CYPRÆA FIMBRIATA.

*Cypræa frimbriata*, Gmelin Syst. Nat.
„ „ Sowerby, Thes. Conch., vol. 4, p. 29, pl. 32, fig. 389.

*Hab.* Darnley Island, Torres Straits; found on the reefs, under coral.

### 58.—CYPRÆA QUADRIMACULATA.

*Cypræa quadrimaculata*, Gray, Zool. Journal, vol. 1, p. 377.
„ „ Sowerby, Thes. Conch., vol. 4, p. 8, pl. 27, fig. 277.

*Hab.* Home Islands, North-East Australia; found on the reefs, under coral. Albany Island, Cape York, North Australia, under stones at low water, received from Mr. C. E. Beddome. Sue Island, Torres Straits, in crevices of coral, under water. Darnley Island, two specimens found in crevices of coral three feet under water at ebb. One specimen dredged at 13 fathoms, sandy mud bottom.

### 59.—CYPRÆA CYLINDRICA.

*Cypræa cylindrica*, Born, Mus., p. 184, pl. 8, fig. 10.
„ „ Sowerby, Thes. Conch., vol. 4, p. 9, pl. 27, fig. 268.

*Hab.* Darnley Island, Torres Straits; found on the reefs.

### 60.—CYPRÆA ASELLUS.

*Cypræa asellus*, Linn. Gmel. p. 3411, No. 56.
„ „ Reeve, Conch. Icon., pl. 18, sp. 98.
„ „ Sowerby, Thes. Conch., vol. 4, Cypræ, pl. 24, fig. 206, 207.

*Hab.* Darnley Island, Torres Straits; found on the reefs.

### 61.—CYPRÆA ARABICA.

*Cypræa Arabica*, Linn. Gmel., p. 3398, No. 3.
„ „ Reeve, Conch. Icon. pl. 1, sp. 2.
„ „ Sowerby, Thes. Conch. vol. 4, p. 15, pl. 10, fig. 59, 61.

*Hab.* Home and Low Islands, North-East Australia; Darnley Island, Torres Straits.

### 62.—CYPRÆA ANNULUS.

*Cypræa annulus*, Linn. Gmel. p. 3415, No. 82.
„ „ Reeve, Conch. Icon., pl. 15, sp. 71.
„ „ Sowerby, Thes. Conch., vol. 4, p. 18, pl. 26, fig. 252, 253.

*Hab.* Cape York, North Australia; Darnley Island, Torres Straits.

### 63.—CYPRÆA TIGRIS.

*Cypræa tigris*, Linn. Gmel. p. 3408, No. 44.
„ „ Reeve, Conch. Icon., pl. 4, sp. 12 b, e.
„ „ Sowerby, Thes. Conch., vol. 4, p. 20, pl. 21, fig. 172, 173, 174.

*Hab.* Darnley Island, Torres Straits; found on the reefs.

### 64.—CYPRÆA VITELLUS.

*Cypræa vitellus*, Linn. Gmel., p. 3407, No. 42.
„ „ Reeve, Conch. Icon., pl. 5, sp. 14.
„ „ Sowerby, Thes. Conch., vol. 4, p. 13, pl. 6, fig. 31, 32, 33.

*Hab.* Darnley Island, Torres Straits; found on the reefs.

### 65.—CYPRÆA LYNX.

*Cypræa lynx*, Linn. Gmel., p. 3409, No. 48.
„ „ Reeve, Conch. Icon., pl. 9, sp. 33.
„ „ Sowerby, Thes. Conch., vol. 4, p. 21, pl. 15, fig. 86*, 87*.

*Hab.* Darnley Island, Torres Straits, found on the reefs; Cape Grenville, North-East Australia.

### 66.—CYPRÆA MILIARIS.

*Cypræa miliaris*, Gmel., p. 3420, No. 106.

„ „ Reeve, Conch, Icon., pl. 10, sp. 36.

„ „ Sowerby, Thes. Conch., vol. 4, p. 36, pl. 17, fig. 109.

*Hab.* Darnley Island, Torres Straits, 20, 30 fathoms, sand bottom.

### 67.—CYPRÆA WALKERI.

*Cypræa Walkeri*, Gray, Sowerby, Conch. Illust. Cat. Cypræadæ, No. 70, fig. 22*.

„ „ Reeve, Conch. Icon., pl. 12, sp. 50 a,b.

„ „ Sowerby, Thes. Conch., vol. 4, p. 25, pl. 18, fig. 123, 124, 125.

*Hab.* Palm Island, North-East Australia, sandy mud, 11 fathoms; Cape Grenville, North-East Australia, 8 fathoms, white sand; Darnley Island, Torres Straits, 20, 30 fathoms, white sand.

### 68.—CYPRÆA ERRONES.

*Cypræa errones*, Linn. Syst. Nat., p. 723.

„ „ Reeve, Conch. Icon., pl. 13, sp. 56.

„ „ Sowerby, Thes. Conch., vol. 1, p. 21, pl. 20, fig. 156, 158.

*Cypræa ovum*, Gmel., *subflava*, Gmel., *olivacea*, Lam.

*Hab.* Darnley Island, Torres Straits, on the reefs under coral.

### 62.—CYPRÆA SOPHIÆ.

*Cypræa Sophiæ*, Brazier, Proc., Linn. Soc., N. S. W., 1875, vol. 1, part 1, p. 7.

*Hab.* Hall Sound, New Guinea. One dead specimen found on the beach.

### 70.—CYPRÆA EROSA.

*Cypræa erosa*, Linn. Gmel., p. 3415, No. 84.

„ „ Reeve, Conch. Icon., pl. 11, sp. 43.

„ „ Sowerby, Thes. Conch., vol. 1, p. 37, pl. 18, fig. 111, 112, 113, 114, 115.

*Hab.* Darnley Island, Torres Straits, on the reefs.

### 71.—CYPRÆA CAURICA.

*Cypræa caurica*, Linn. Gmel., p. 3415, No. 83.
„ „ Reeve, Conch. Icon., pl. 11; sp. 46.
„ „ Sowerby, Thes. Conch., vol. 4, p. 8, pl. 23, fig. 188, 189, 191.

*Hab.* Darnley Island, Torres Straits, on the reefs.

### 72.—TRIVIA SCABRIUSCULA.

*Cypræa scabriuscula*, (*Trivia*), Gray, Sowerby, Conch. Illus. fig. 38.
„ „ „ Sowerby, Thes. Conch., vol. 4, p. 46, pl. 35, 472, 473, pl. 37, fig. 525.

*Hab.* Home Islands, off Cape Grenville, North-East Australia, on the reefs under coral; Albany Island, Cape York, North Australia, under stones.

### 73.—TRIVIA ORYZA.

*Cypræa oryza*, Lam. Anim. Sans Vert., tome 7, p. 403.
„ „ Reeve, Conch. Icon., pl. 24, sp. 140.
„ „ (*Trivia*), Sowerby, Thes. Conch., vol. 4, pl. 35, fig. 474, 475, 476.

*Hab.* Cape Grenville, North-East Australia, 20 fathoms, sand bottom.

### 74.—TRIVIA GRANDO.

*Cypræa grando*, Gaskoin, Proc. Zool. Soc., London, 1848, p. 96.
„ „ (*Trivia*), Sowerby, Thes. Conch., vol. 4, pl. 35, fig. 470, 471.

*Hab.* Darnley Island, Torres Straits, 25 fathoms, sandy mud.

### 75.—TRIVIA VITREA.

*Cypræa vitrea*, Gaskoin, Proc. Zool. Soc., London, 1848, p. 95.
„ „ (*Trivia*), Sowerby, Thes. Conch., vol. 4, pl. 35, fig. 456, 457.

*Hab.* Darnley Island, Torres Straits, 25 fathoms, sandy mud bottom.

### 76.—TRIVIA SULCATA.

*Cypræa sulcata*, Gaskoin, Proc. Zool. Soc., London, 1848, p. 95.

„ „ (*Trivia*), Sowerby, Thes. Conch., vol. 4, pl. 35, fig. 454, 455.

*Hab.* Bet Island, Torres Straits, 11 fathoms, coral and sand bottom.

### 77.—TRIVIA PELLUCIDULA.

*Cypræa pellucidula*, Gaskoin, Proc. Zool. Soc., London, 1846, p. 23.

„ „ (*Trivia*), Sowerby, Thes. Conch., vol. 4, pl. 36, fig. 497-98-99.

*Hab.* Darnley Island, Torres Straits, 25 fathoms, sandy mud.

### 78.—TRIVIA PRODUCTA.

*Cypræa producta*, Gaskoin, Proc. Zool. Soc. London, 1835, p. 200.

„ „ Reeve, Conch. Icon., pl. 24, sp. 137 a,b.

„ „ (*Trivia*), Sowerby, Thes. Conch., vol. 4, pl. 36, fig. 495, 496.

*Hab.* Darnley Island, Torres Straits, 30 fathoms, hard white sand bottom.

### 79.—TRIVIA GLOBOSA.

*Cypræa globosa* (*Trivia*), Gray, Sowerby, Conch., Ill. fig. 34.

„ „ Reeve, Conch. Icon., pl. 26, sp. 152.

„ „ (*Trivia*), Sowerby, Thes. Conch., vol. 4, pl. 35, fig. 446, 447.

*Hab.* Darnley Island, Torres Straits, 20 fathoms, sandy mud bottom.

### 80.—PUSTULARIA LIMACINA.

*Cypræa limacina*, Lam. Anim. Sans Vert., tome 7, p. 400.

„ *interstincta*, Wood, Index, Test. Suppl., p. 9, pl. 3, fig. 9.

„ *limacina*, Reeve, Conch. Icon., pl. 16, fig. 82a.

„ „ Sowerby, Thes. Conch., vol. 4, pl. 25, fig. 223, 224.

*Hab.* Darnley Island, Torres Straits; found in coral at low water.

### 81.—PUSTULARIA STAPHYLÆA.

*Cypræa staphylæa*, Linn. Gmel. 3419, No. 97.

„ „ Reeve, Conch. Icon., pl. 16, fig. 82b.

„ „ Sowerby, Thes. Conch., vol. 4, pl. 25, fig. 228, 229.

*Hab.* Darnley Island, Torres Straits, found in coral at low water; light coloured variety at 20 fathoms, sandy mud bottom; also off Shark Point, Port Jackson, 7 fathoms, mud bottom.

## FAMILY AMPHIPERASIDÆ.

### 82.—AMPHIPERAS OVUM.

*Bulla ovum*, Linn. Gmel. p. 3422, No. 1.

*Ovula oviformis*, Lam. Anim. Sans Vert., tome 6, p. 366.

*Ovulum ovum*, Sowerby, Thes. Conch., vol. 2, p. 467, pl. 99, fig. 1, 2.

*Hab.* Darnley Island, Torres Straits; deep water near the edge of the Reefs.

### 83.—AMPHIPERAS ANGULOSA.

*Ovula angulosa*, Lam. Anim. Sans Vert., tome 7, p. 367.

„ *costellata*, Lam. Ann. du Mus., vol. 16, p. 110, No. 2.

*Ovulum angulosum*, Sowerby, Thes. Conch., vol. 2, p. 467, pl. 99, fig. 4, 5.

*Hab.* Darnley Island, Torres Straits; found in deep water at the edge of the reefs.

### 84.—AMPHIPERAS STRIATULA.

*Ovulum striatulum*, Sowerby, Thes. Conch., vol. 2, p. 472, pl. 101, fig. 85.

*Hab.* Katow, New Guinea, 8 fathoms, sandy mud bottom.

### 85.—AMPHIPERAS PUNCTATA.

*Ovulum punctatum*, Duclos., Mag. Zool., 1828.

„ „ Sowerby, Thes. Conch., vol. 2, p. 471, pl. 101, fig. 91.

*Hab.* Bet Island, Torres Straits, 11 fathoms, white sand bottom; Port Stephens, New South Wales (Brazier.)

### 86.—AMPHIPERAS BREVIS.

*Ovulum breve*, Sowerby, Thes. Conch., vol. 2, p. 469, pl. 101, fig. 70, 71.

*Hab.* Darnley Island, Torres Straits, 25, 30 fathoms, sandy bottom; Port Stephens, New South Wales (Brazier.)

### 87.—VOLVA VOLVA.

*Bulla volva*, Linn. Gmel., p. 3422, No. 2.

*Ovula volva*, Lam. Anim., Sans Vert, tome 7, p. 370.

*Ovulum volva*, Sowerby, Thes. Conch., vol. 2, p. 482, pl. 99, fig. 6, 7, 8.

*Birostra volva*, Chenu, Manuel de Conch., part 1, p. 273, fig. 1794.

*Hab.* Darnley Island, Torres Straits, 30 fathoms, sandy mud bottom; Port Stephens, New South Wales, living specimens washed on shore after gales (Brazier).

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## Notes on the Entomology of New Ireland. By WILLIAM MACLEAY, F.L.S.

THE annually increasing intercourse between Australia and the Papuan and Polynesian regions has enabled us of late years to make ourselves well acquainted with their zoological and botanical productions. Englishmen have now succeeded in establishing themselves as missionaries or traders in one or more of the islands of almost every group from New Guinea on the West to the Society Islands on the East. Our present predominating influence in these seas should not, however, make us forget how much has been done in the cause of science by other countries and in other times. Until thirty years ago it was chiefly to France that the world was indebted for what was then known of the geography and natural history of the countries of the Pacific Ocean.

From the re-establishment of Constitutional Monarchy in 1816 to its fall in 1848, France was distinguished amongst nations for the many scientific expeditions sent out by the Government, and the magnificent publications in which the results of these voyages and travels were recorded.

Among those voyages which have been most productive of results, as far as the Australasian region is concerned, may be cited that of the corvette Uranie, under the command of M. L. de Freycinet, in the years 1817, 1818, 1819, and 1820; that of the corvette Coquille, commanded by M. Duperry in 1822, 1823, 1824, and 1825; that of the Astrolabe, commanded by M. Dumont D'Urville, in 1826, 1827, 1828, and 1829; and that of the corvettes L'Astrolabe and La Zelee, under the command of M. J. Dumont D'Urville, and M. Jacquinot, in the years 1837, 1838, 1839, and 1840.

The zoological collections made during these voyages were very considerable, and the results were worked out by the French naturalists of the day, and published with large Atlases of Plates, at the cost of the Government. I refer now to these voyages because I have lately become possessed of a collection of insects from an island which was visited by one of the abovenamed ships—the Coquille—in 1823, and which may be said not to have been visited since, as far as any observation of its natural history was concerned, until the latter part of last year and the first few months of the present. Mr. Cockerell, an ardent and experienced collector of natural objects, was permitted last year to accompany a Wesleyan mission to New Ireland, and he has now returned to Sydney, after several months residence on that island, with a valuable collection of animals of all orders. The mammals, birds, reptiles, and fish of Mr. Cockerell's collection have been secured for the Australian Museum by Mr. Ramsay, who, I doubt not, will give us some account of them. The insects were purchased by me, and the following notes are intended to give a general idea of the Entomological Fauna of the island.

As might be expected from its geographical position, the insects of New Ireland belong almost entirely to families and forms to be found either in Papua or Polynesia, but with I think a somewhat stronger affinity to the Fauna of the Polynesian sub-region.

The Coleoptera seem, as in all of these islands, to be few in point of species, though frequently of great size and beauty. The Cicendelidæ are represented by three species : a *Cicindela*, species doubtful, *Therates labiatus*, and *Tricondyla aptera*. There is only one species of the family of Carabidæ, so numerous in other parts of the globe. It resembles a *Lesticus*. A species of *Passandra*, four species of *Passalus*, and two of the Lucanidæ, seem to resemble those of the Solomon Islands, but I have not yet examined them closely. The Lamellicornes consist of six species. Of these four belong to the *Dynastidae*, and are of large size—one very similar to the Australian *Scapanes solidarius*. The other two species are a *Silphodes*, and a large *Melolontha*. There are two handsome species of Buprestidæ, both of the *Chrysodema* group. The Elateridæ are represented by two species of *Alaus*. The Cleridæ by a *Cylidris* and an *Omadius*. There are two species of the *Bostrychidæ*—small wood-borers of the genus *Apate*.

The Heteromera number only six species. A large *Nyctobates*, an *Asida*, three species of *Amarygmus*, and a peculiar form of *Cistela*.

There are in all fourteen species of the *Curculionidæ*, three of the *Rhinoscapha* or *Eupholus* group, two of *Pachyrhynchus*, one *Orthorhinus*, one *Lixus*, one near *Tranes*, three *Cryptorhynchidæ*, one *Zygops*, one *Rhyncophorus*, and one *Sipalus*. There are six species of the *Brenthidæ*, all apparently common forms, and one of the *Anthribidæ*, a distinctly Polynesian form. As in all these countries, however, the *Longicornia* take the first place as regards size, beauty, and number. Among them there is a *Batocera*, to which even the huge *B. Wallacei*, of New Guinea, must yield the palm. One specimen is more than three inches and a half long, and its antennæ are fully three times that length. In all there are four species of *Batocera*, thirteen species of other *Lamiidæ*, for the most part large and showy insects, one *Parandra*, two *Prionidæ*, one of large size, and a few small *Cerambycidæ*, of genera with which I am unacquainted. Three or four species of very ordinary looking *Phytophaga* complete the Coleoptera.

The collection of Lepidoptera is limited almost entirely to the diurnal species, but these are remarkable even in comparison with the butterflies of New Guinea for their beauty and variety.

There are many fine specimens of a green *Ornithoptera* of great size. The females measure nine inches from tip to tip of the wings, and have a paler and more diaphanous colouration than the females of *O. Priamus*. There are also several fine specimens of *Ornithoptera Urvilliana* Guer, a blue species brought from Port Praslin by the Coquille, fifty-five years ago. A very good figure of this insect is given in the Atlas of Plates, published with the "Natural History of the Voyage of the Coquille."

Besides these there are eight species of *Papilio*, *P. Polydorus*, or a variety of it, *P. Ormenus*, a species somewhat resembling *P. Ambrax*, a variety of *P. Ulysses*, probably the *Penelope* of Wallace; *P. Sarpedon;* two species of the *P. Agamemnon* group, one of them, I believe, to be *P. Wallacei*, the other is probably new; and a very fine species resembling *P. codrus.*

The Pieridæ are poor, and very ordinary looking. One species of *Tachyris*, two of *Terias*, and one *Callidryas*, complete the list of them. Among the *Nymphalidæ* are *Cethosia obscura*, Guerin—one of the Coquille insects of 1823, and figured in the Atlas to that voyage, *Junonia Vellida*, *Precis Zelima*, *Rhinopalpa Sabina*, Cram., (figured and described in the voyage of the Coquille, under the name of *Vanessa Amelia*), *Messaras Lampetia*, *Cynthia Arsinoe*. a species of *Neptis*, *Apaturina Erminia*, Cram., a species of *Adolias*, one of *Cyrestis*, *Diadema Misippus*, *Diadema Alimena*, and a magnificent cream-coloured butterfly, which I imagine must be also a species of *Diadema*.

The *Morphinæ* are represented by numerous specimens of *Drusilla Catops*. Of the *Satyrinæ* there are six species, *Melanitis amabilis*, Boid; three species of *Mycalesis*, all unknown to me; and two species of *Ypthima*, or an allied genus.

The *Danaidæ*, as is usual in these latitudes, are well represented. There are six species of *Euplœa*, two of *Danais*, and one of *Hamadayas*, all differing more or less from species known to me, but all having very much the general aspect of the Polynesian Fauna. One circumstance connected with this group is worth noticing. There are no specimens in the collection of *Danais Erippus*, Cram., an American species which a few years ago succeeded in crossing the Pacific Ocean, and establishsng itself in Australia. The absence of this insect from the New Ireland collection helps to indicate the route by which it passed the ocean. Two years before the first appearance of the butterfly on the east coast of Australia, I received numerous specimens from the New Hebrides and islands to the south of that latitude, so that there is reason to assume that the general course of the migration which seems to have occupied several years, was, as regards the western portion of the Pacific, far south of the equator.

The Lycænidæ number thirteen species, all, I believe, of the genus *Cupido;* among them the *Cupido Cleo'as*, Guer., figured and described in the voyage of the Coquille. There are seven species of the Hesperidæ, all of well known genera.

In all there are sixty-three species of butterflies.

Among the day-flying moths there are some gems.

There are two species of *Nyctalemon*, one probably the *N. Achillaria* of New Georgia, the other quite new to me; one new and beautiful species of Agarista; *Cleis posticalis*, Guer., and another species of the same genus. Of *Hypsa* and *Nyctemera* there are several handsome species, as also of *Eumelia*, *Micronia*, *Erebus*, and *Trigonotus*.

The HEMIPTERA are neither numerous nor remarkable. A *Scutellaria*, a few species of *Reduvius*, and a few other common forms constitute the whole collection of this order.

The ORTHOPTERA seem to be of great size, and tolerably numerous. A large *Eurycantha* is the most formidable looking; the others are mostly insects of universal occurrence.

The HOMOPTERA consist only of two speciesof *Cicada* and a small tree-hopper.

The HYMENOPTERA of a *Pompilus* a *Bembex*, an *Odynerus*, and two *Ichneumonidæ*, one of them of a novel and very curious form.

The NEUROPTERA are represented by two species of *Libellula*.

Of DIPTERA there are only a few species, but the paucity of number is compensated for by the extraordinary appearance of one species. The head is transverse, quite twice as broad as the body, and pointed at each end, having much the shape of the "eeliman" of the Australian aboriginal. The eyes occupy the pointed ends of this wonderfully-shaped head. This insect in no way resembles, and must not be confounded with the well known geuus *Diopsis*, which has its eyes on a long peduncle. It belongs to the genus *Zygothrica*, of Wiedemann, a genus of which very little seems to be known except that the curiously shaped head is an ornament of the males only, the head of the female being rounded.

This brief summary of the Entomological productions of New Ireland will give the naturalist a general idea of the character of its fauna. Mr. Cockerell made the collection which I have now summarised in the period of a few months, and from a very small portion of the island. What may we not expect from a thorough and complete search of that and the adjacent island of New Britain? New Ireland extends for nearly 150 miles from north to south; and New Britain, 350 miles from east to west, and both of these islands, with the small exceptions of the collections made at Port Praslin by the Coquille in 1823, and Mr. Cockerell in 1875-1876, present an untouched and certainly a very promising and rich field for the naturalist and collector.

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## Notes on Lævicardium Beechei—by JOHN BRAZIER, C.M.Z.S., Cor. Mem. Roy. Soc., Tas.

### LÆVICARDIUM BEECHEI.

*Cardium Beechei*, Adams and Reeve. Zool. Moll. Voyage of H.M.S. Samarang, 1850, p. 78, pl. 22, fig. 12.

*Hab.* Sooloo Sea, between the island of Borneo and Mindanoa, 40 fathoms; also, Yellow Sea at one of the islands of the Corean

Archipelago (Adams and Reeve). Percy Island, North-east Coast of Australia (Mr. F. Strange). Cape Grenville, north-east Australia, 25 fathoms, sandy mud bottom, one valve found (Brazier). Darnley Island, Torres Straits, 20·30 fathoms, sandy bottom, one valve found (Brazier). Bulari Passage, New Caledonia, fine living specimen found in the stomach of a Schnapper, *Pagrus unicolor*—by Monsieur Fabre, the pilot stationed there.

This interesting Cardium is, without exception, the most striking and distinct from any hitherto known that can well be imagined. In colour it is of a fine rose tint, with the following singular and peculiar soft velvety appearance, the effect of its being minutely decussated with concentric and radiating striæ, and covered with an exquisitely thin, shining, horny epidermis, disposed in fine concentric cords, abruptly terminating at the posterior area. The posterior portion, accordingly destitute of epidermis, is very thickly rayed with ribs of short compressed spines, as if the delicately-clad surface of the shell had been thus far ploughed up as it were into furrows; a little of the epidermis is removed by the action of being in the stomach of the Schnapper. The specimen I show to-night was sent to me for my inspection and nomenclature by my kinsman, Mr. R. C. Rossiter, who has the finest collection of New Caledonian shells.

There were two fine living specimens in the Australian Museum some years ago, dredged by the late Mr. F. Strange, at Percy Island; one specimen was purloined by a gentleman who at one time held an appointment in that institution.

## Description of a New Species of *Halmaturus*, from New Ireland—by E. PIERSON RAMSAY, Curator of the Australian Museum, Sydney.

### HALMATURUS BROWNII. NEW SPECIES.

THE whole of the upper surface, the chin and a stripe on either side from the angle of the mouth to the cheek, the outer portion of the legs and arms, upper part of the tail at the base, of a rich, deep, dark, glossy brown. A whitish line extends from the snout along the margin of the upper lip, and widening out on the cheek, reaches to underneath the eye. The throat and whole of the under surface whitish, slightly tinged on the sides, and round the flanks and vent with yellowish, hair on the inside and margin of pouch, rufous yellow. The fur is fine, long, and silky, more so in the young animals than in the adult; that at the base of the ears long, on the occiput just behind the ears is a curled patch of hair radiating and exposing the skin in the centre. The hairs directed forward to between the ears meet those on the head directed backwards, and form just in front of the ears, two ridges meeting at an angle on the base of the forehead, and there forming a small pointed tuft; the hair at the base and on the margin of the ears in front and on the inside is of a light yellowish tint, or whitish. Ears long, somewhat pointed; fore limbs slender; hind limbs stouter, with the toes and nails strong, the latter triangular, conical and blunt. Tail cylindrical or but slightly tapering, basal third clothed with hair, dark brown above, whitish below, the remaining two-thirds sparingly clothed with hairs; the scales numerous and conspicuous, muffle naked; eyelash black; *under surface* of tail clothed with stiff hairs, the *sides* almost naked, scaly.

Total length from tip of nose to tip of tail, 3 feet.

Head, 4 inches.

Tail, 14 inches.

Forefoot, 1·3; longest toe, 0·8; its nail, 0·45.

Hind foot, 4·3; longest toe, 1·5; its nail, 0·9.

Outer toe, 0·9; its nail, 0·7.

Inner conjoined toes, 0·65; nails, 0·35.

From tip of snout to centre of orbit, 2·1.

From tip of snout to ear, 3·4.

Total length of skull, 3·75, greatest width about centre of zygomatic arch, 1·9.

Height at base, 1 inch; width, 1·3.

Distance of space between third incisor and first premolar, 0·6.

Dental series (*the last molar just cutting*) 1·3.

Width of palate across point of posterior palatial openings, 3·75; anterior openings large, oblong, 0·3 x 0·1; distance between the anterior and posterior openings, 1·05.

It will be seen from the following dental formula that the premolars have not yet been shed, and on examination I find the permanent premolar pushing through to be nearly 0·3 inch; distance between insertion of upper incisor and that of permanent premolar, 0·75.

$$\text{Incisors}\frac{3-3.}{1-1} \qquad \text{Premol.}\frac{2-2.}{2-2} \qquad \text{Mol.}\frac{4-4.}{4-4}$$

The distance between the insertion of the lower incisor and that of the first premolar in the lower jaw is 0·4, to the end of permanent premolar still embedded in the jaw, 0·7; premolar, 0·25.

Present range of teeth in lower jaw, 1·3 with permanent premolars about 1·15 inch.

This very distinct and beautiful species, which I have named after its discoverer, was obtained in New Ireland by the Rev. George Brown, of the Wesleyan Mission Society, a gentleman to whom science is greatly indebted for many valuable discoveries in the natural history of those islands lying eastward of New Guinea.

The specimen here described was purchased, with other mammals, of Mr. James Cockerell, who accompanied the Rev. Mr. Brown as taxidermist, and to whose energy a large portion of the grand collection made during the voyage is due.

The largest specimen (a male) obtained by Mr. Brown, who has kindly permitted me to examine his collection, measured as follows:—

Length from nose to root of tail, 2·17; tail, 16 inches; hind leg and foot, 18 inches; foot, 5 inches; nail, 1 inch; fore arm, 4 inches; hand, 1·1 inches; nail of longest toe, 0·6 inch.

Head, 4½ inch; to ear from snout, 4 inches; from snout to centre of orbit, 2·6 inches.

## Description of a New Species of *Perameles*, from New Ireland —by E. Pierson Ramsay, Curator of the Australian Museum, Sydney.

### PERAMELES COCKERELLII. Nov. Sp.

HEAD conical, pointed; snout long, tapering; eye small; ears small, rounded, almost as broad as long; limbs short and thick made; hind feet broad; nails of fore feet strong, arched, rounded; the outer and inner toes rudimentary, and without nails; the fur harsh; spiny on the back, composed of flat, grooved spines, black hairs intermixed with fine hair of a rusty brown colour; on the sides the spiny hairs are blackish, tipped with rusty not so stiff, and mixed with rusty and grey hairs of a finer texture; the rusty colour more conspicuous on the thighs and hind legs; under surface light ashy grey or white; hair on the inner side of the limbs without spines; feet clothed with flattish, light ashy brown or grey hairs; the basal portion of which is brown; head blackish-brown, with a few fine grey hairs; snout bare; sides of the face, throat, and chest light ashy brown; ears with a few reddish hairs on inner surface, blackish on the outer; tail blackish above, whitish beneath, apparently naked, but clothed very sparingly with fine hairs.

From snout to root of tail, 10 inches; tail, 2·5 inches; head, 2·7; fore feet, 1 inch; nail of longest toe, 0·4.

Hind feet, 1·9; longest toe, 0·7; its nail, 0·4.

From snout to eye, 1·7; from snout to base of ear, 2·6; ear, 0·7 x 0·6.

*Hab.* New Ireland.

A larger specimen measured: Total length from snout to root of tail, 12 inches; tail, 3·2; hind foot, 2·3; fore foot, 1·3; from snout to base of ear, 3 inches; to orbit, 2·2.

This species I have named after Mr. James Cockerell, who accompanied the Rev. George Brown during his recent missionary voyage to the islands north-east of New Guinea, and from whom the Museum obtained the present specimen, only two of which species were obtained during the trip.

## MONDAY, 25TH NOVEMBER, 1876.

WILLIAM MACLEAY, Esq., F.L.S., President, in the Chair.

The Secretary announced the receipt of the "Proceedings of the Societé Entomologique de Belgique for September, 1876."

Mr. Brazier exhibited a new and handsome species of *Murex* from Port Darwin. He announced his intention of describing it at a future meeting of the Society.

The following Papers were read :—

## Shells collected during the Chevert Expedition. By J. BRAZIER, C.M.Z.S., Cor. Mem. Roy. Soc., Tas.

### FAMILY CANCELLARIIDÆ.

### 1.—CANCELLARIA MACROSPIRA.

*Cancellaria macrospira,* Adams and Reeve, Moll. Voyage, Samarang, p. 41, pl. 10, fig. 2.

*Hab.* Darnley Island, Torres Straits, sandy mud bottom, 30 fathoms. Also, Coast of Borneo and China Sea (Belcher.)

### 2.—CANCELLARIA AUSTRALIS.

*Cancellaria Australis,* Sowerby, Thes. Conch., vol. 2, p. 442, pl. 95, fig. 72-73.

*Hab.* Darnley Island, Torres Straits, sandy mud bottom, 30 fathoms.

### 3.—CANCELLARIA (TRIGONOSTOMA) BICOLOR.

*Cancellaria bicolor,* Hinds, Proc. Zool. Soc., London, 1843, p. 48.
„ „ Sowerby, Thes. Conch., vol. 2, p. 456, pl. 94, fig. 49-50 ; pl. 95, fig. 69.

*Hab.* Cape Grenville, North-East Australia, 25 fathoms, sandy mud bottom, specimens white ; Darnley Island, Torres Straits, 30 fathoms, sandy mud, specimen white, spirally banded with narrow brown bands.

### 4.—CANCELLARIA (TRIGONOSTOMA) LAMELLOSA.

*Cancellaria lamellosa*, Hinds, Proc. Zool. Soc., London, 1843, p. 49.

" " Sowerby, Thes. Conch., vol. 2, p. 453, pl. 94, fig. 47; pl. 96, fig. 106.

*Hab.* Darnley Island, Torres Straits, 15 fathoms, sand bottom.

### 5.—CANCELLARIA (TRIGONOSTOMA) OBLIQUATA.

*Cancellaria obliquata*, Lam. Anim. Sans Vert., tome 7, p. 115.

" " Sowerby, Thes. Conch., vol. 2, p. 453, pl. 96, fig. 83.

*Hab.* Palm Island, North-East Coast of Australia, 8 fathoms, mud bottom; Darnley Island, Torres Straits, 30 fathoms, sandy bottom.

## FAMILY TRICHOTROPIDÆ.

### 6.—TRICHOTROPIS TRICARINATA, N. SP.

Shell somewhat conical, whity-brown, deeply umbilicated; strongly three-keeled at the periphery, the keel at the angle running into the suture, keels showing faint minute spicules (only seen with the lens); whorls 4½, somewhat tabled, the last large and angled above in front, spire rather more than half the whole length, apex smooth, white; umbilicus wide, bordered with a broad keel, which forms the outside of a very narrow canal at the base; columella narrow, thin, straight; aperture squarely ovate; peristome continuous, divided by a small passage between the body whorl, slightly expanded at the base.

Length, 2¾ ;. breadth, 2¼ ; least, 1¾ line.
" 2¼; " 1¾; " 1¼ line.

*Hab.* Bet Island, Torres Straits, 11 fathoms, white sandy mud bottom; off Katow, New Guinea, 7 miles; bottom sand and mud, 8 fathoms. This species differs from any of the known Trichotropis by its large and open umbilicus somewhat like *T. unicarinata*, (Sowb.), the lip being continuous and divided from the body whorl by a small narrow passage. Only one speciman found at Bet Island, Torres Straits, it being 2¾ lines long, 2¼ lines in breadth, least 1¾ lines. Two specimens obtained off Katow, New Guinea, much smaller, both dead and somewhat seaworn.

### 7.—TRICHOTROPIS GRACILENTA, N. SP.

Shell turrited, thin, transparent, umbilicated, smooth; whorls 5½, flatly spirally angled, three-keeled, one on the angle, one in the centre, and one above the suture, studded with close set, obtuse, nearly obsolete spines; spire acuminated; apex white, shiny, smooth, rounded, umbilicus narrow, with a small keel bordering the edge; aperture nearly rounded; columella slightly tortuous, acuminated at the lower part.

Length, 2¾; breadth, 1⅓; least, 1 line.

*Hab.* Darnley Island, Torres Straits, 30 fathoms, white sandy mud bottom. One specimen found (Brazier).

There are thirteen species of Trichotropis at present known, namely *T. Cedo-nulli*, A. Ad.; *bicarinata*, Brod. and Sowerby; *unicarinata*, Brod. and Sowerby; *quadricarinata*, A. Adams—all from Japan; *Borealis*, Brod. and Sowerby, Behring's Straits, Greenland and North Britain; *insignis*, Middendorf, Behring's Straits; *cancellata*, *flavidula*, *inermis*, Hinds, Sitka, North-West Coast of America; *Ruzeri*, Phillippi, Spitzbergen; *conica*, Muller, Greenland; *costellata*, Couthouy, North America; *clathrata*, A. Adams, New Zealand, on the authority of Mr. A. Adams. The present two new species from Australia bring the number up to fifteen.

## FAMILY CERITHIIDÆ.

### SUB-FAMILY CERITHIINÆ.

### 8.—CERITHIUM NODULOSUM.

*Cerithium nodulosum*, Brug. Dict. No. 8.

„ „ Lam. Anim. Sans Vert., tome 7, p. 67.

„ *nodulasa*, Cathow, Conchologists' Nomenclator, p. 227.

„ *nodulosum*, Sowerby, Thes. Conch., vol. 2, p. 854, pl. 178, fig. 42.

*Murex tuberosus*, Dillwyn. *Murex nodulosus*, Wood.

*Hab.* Darnley Island, Torres Straits, found on sandy mud flats inside the reefs.

### 9.—CERITHIUM COLUMNA.

*Cerithium columna*, Sowerby, Thes. Conch., vol. 2, p. 855, pl. 178, fig. 56.

*Hab.* Darnley Island, Torres Straits, found with *Cerithium nodulosum*.

### 10.—CERITHIUM NOVÆ HOLLANDIÆ.

*Cerithium Novæ-Hollandiæ*, A. Adams in Sowerby's Thes. Conch., vol. 2, p. 864, pl. 178, fig. 54.

*Hab.* Cape York, Mud Bay, North Australia; found at low water in the crevices of large coral blocks.

### 11.—CERITHIUM BALTEATUM.

*Cerithium balteatum*, Philippi, Abbild., t. 1., fig. 10.

„ „ Sowerby, Thes. Conch., vol. 2, p. 862, pl. 181, fig. 116-117.

*Hab.* Cape York, Mud Bay, North Australia; Darnley Island, Torres Straits—found under coral.

### 12.—CERITHIUM LEMINSCATUM.

*Cerithium leminscatum*, Quoy., Voy. de l'Astr., v. 3, pl. 54, fig. 16, 18.

„ „ Sowerby, Thes. Conch., vol. 2, p. 873, pl. 183, fig. 187.

*Hab.* Dungeness and Darnley Islands, Torres Straits; found on the reefs under coral.

### 13.—CERITHIUM MONILIFERUM.

*Cerithium moniliferum*, Kiener, Icon. Coq., viv., p. 49, pl. 16, fig. 3.

„ „ Sowerby, Thes. Conch., vol. 2, p. 870, pl. 182, fig. 165.

*Hab.* Dungeness Island, Torres Straits; found on the reefs.

### 14.—CERITHIUM VARIEGATUM.

*Cerithium variegatum*, Quoy, Voy. de l'Astr., vol. 3, p. 139, pl. 55, fig. 17.

„ „ Sowerby, Thes. Conch., vol. 2, p. 870, pl. 182, fig. 166, 167.

*Hab.* Home Islands, off Cape Grenville, North-East Australia; Barrow Island, North-East Australia; Darnley Island, Torres Straits—found on the reefs.

### 15.—CERITHIUM FUSIFORME.

*Cerithium fusiforme,* Sowerby, Thes. Conch., vol. 2, p. 162, pl. 180, fig. 106-107.

*Hab.* Palm Island, North-East Australia, 8 fathoms, mud bottom; Darnley Island, Torres Straits, 25 to 30 fathoms.

### 16.—CERITHIUM EXIMIUM.

*Cerithium eximium,* Sowerby, Thes. Conch., vol. 2, p. 863, pl. 183, fig. 192,

*Hab.* Darnley Island, Torres Straits, 15, 20, 30 fathoms, sandy bottom.

### 17.—CERITHIUM GRANOSUM.

*Cerithium granosum,* Kiener, Icon. Coq., viv., pl. 4, fig. 3.
„ „ Sowerby Thes. Conch., vol. 2, p. 163, pl 111, fig. 123-124.

*Hab.* Cape York, Albany Passage, North Australia, 11 fathom white sandy mud bottom.

### 18.—CERITHIUM MORUS.

*Cerithium morus,* Lam. Anim. Sans Vert., tome 7, p. 75.
„ „ Sowerby, Thes. Conch., vol. 2, p. 870, pl. 182, fig. 160.

*Hab.* Hall Sound, New Guinea; found on the reef under stones.

### 19.—CERITHIUM SALEBROSUM.

*Cerithium salebrosum,* Sowerby, Thes. Conch., vol. 2, p. 862, pl. 181, fig. 114, 115.

*Hab.* Palm Island, North-East Australia, 8 fathoms, mud bottom.

### 20.—CERITHIUM MITRÆFORME.

*Cerithium mitræforme,* Sowerby, Thes. Conch., vol. 2, p. 873, pl. 183, fig. 190.

*Hab.* Mud Bay, Cape York, North Australia; found on sandy mud flats at low water.

### 21.—CERITHIUM RUBUS.

*Clava rubus*, Martyn, Universal Conch., pl. 28.

*Cerithium rubus*, Deshayes, Anim. Sans Vert., vol. 9, p. 310.

" " Sowerby, Thes. Conch., vol. 2, p. 873, pl. 183, fig. 188, 189.

*Murex serratus*, Wood, Index. Test., pl. 28, fig. 158.

*Hab.* Mud Bay, Cape York, North Australia; found with *Cerithium mitræforme*, Sowerby.

### 22.—CERITHIUM ROSTRATUM.

*Cerithium rostratum*, Sowerby, Thes. Conch., vol. 2, p. 861, pl. 180, fig. 104.

" *gracile*, Pease, Proc. Zool. Soc., London, 1860, p. 432.

*Hab.* Darnley Island, Torres Straits, 30 fathoms, white sand bottom.

### 23.—CERITHIUM TURRITUM.

*Cerithium turritum*, Sowerby, Thes. Conch., vol. 2, p. 860, pl. 180, fig. 101.

*Hab.* Darnley Island, Torres Straits; 5, 10, 20, 30 fathoms, sand and sandy mud bottom. The most common species found.

### 24.—CERITHIUM ABBREVIATUM. N. SP.

Shell turrited, white, slightly ventricose in the centre; whorls 7; longitudinally ribbed interstices with transverse lines showing on the edge of the ribs like small nodules; suture somewhat deep; spire lengthed; apex acute, rose tinted, aperture rounded, contracted at the columella and expanded backwards, brown spot within; canal short, slightly curved.

Length 3; breadth 1¼ lines.

*Hab.* Katow, New Guinea; 8 fathoms, sandy mud bottom. This species is much shorter and narrower than *Cerithium rhodostoma*, A. Adams, from Port Jackson, and *C. fucatum*, Pease, from Sandwich Islands. Two specimens were found at 7 miles off Katow.

### 25.—CERITHIUM BICANALIFERUM. N. SP.

Shell thin, elevated, white or brown, spirally encircled in the centre with darker brown; whorls 14, flat with transverse lengthened nodules, the centre raised in the form of longitudinal ribs and crossed with a fine spiral line, sometimes two; suture excavated, rather wide and deep, having a spiral line, body whorl with a rounded varice on the left side of the aperture; strongly transversely striated below the periphery; spire produced; apex acute; aperture pear shaped; columella slightly twisted; flesh tinged inside, below white; canal short, narrow, slightly turned to the left; outer lip thin at the lower part, spotted with brown on the edge, the upper part thickened behind like a varice, with a moderately wide and deep canal or sinus, and joined to the upper part of the body whorl.

Length 5; breadth from each side 1½ lines; above last whorl 1¼ lines.

Length from upper to lower canal 1¼ lines; breadth of aperture ¾ lines.

*Hab.* Darnley Island, Torres Straits, 30 fathoms, white sand bottom. Eight specimens of this interesting new species were found; it partakes very much of the character of the Pleurotomidæ by having the sinus at the upper part of the peristome.

### 26.—CERITHIUM MINIMUM. N. SP.

Shell pyramidal, pale brown; whorls 10, flat; suture excavated, longitudinally ribbed, transversely lined in the interstices; spire produced; apex acute, pink; last whorl strongly spirally keeled with 7 keels; interstices minutely striated; large white rounded varice on the left side; columella bright brown, slightly twisted at the lower part; canal wide, short; aperture oblong ovate; peristome thin, expanded at the lower part, thickened behind in the centre, with a varice contracted above, having a small sinus.

Length 2¾; breadth ¾ lin.

*Hab.* Darnley Island, Torres Straits, 15 fathoms, sandy mud bottom.. Ten specimens were found; some of a pale brown, others of a brownish yellow. Bet Island, Torres Straits, 11 fathoms, sandy bottom; one specimen found having the ribs more rounded and not flat.

### 27.—CERITHIUM ? SP.

*Hab.* Cape York, North Australia, 6 fathoms, sandy mud bottom. Three specimens were found dead and sea worn.

### 28.—CERITHIUM. ? SP.

[illegible] ustralia, 15 fathoms, mud [illegible] orn.

### 29.—VERTA[illegible] VULGARIS.

*Murex vertagus*, Linn. Gmel. [illegible] 560, No. 133.
*Cerithium vertagus*, Lam. An[illegible] ans Vert., tome 7, p. 73.
„ „ Brug. Enc. [illegible] th., pl. 443, fig. 2.
*Vertagus vulgaris*, Schumacher.

*Hab.* Palm Island, North-east Australia; found on the reefs. Darnley Island, Torres Straits.

### 30.—VERTAGUS FASCIATUS.

*Cerithium fasciatum*, Brug. Enc. Meth., p. 474, No. 3.
„ „ Lam. Anim. Sans Vert., tome 7, p. 73.
„ „ (Vertagus) Sowerby, Thes. Conch., vol. 2, p. 849, pl. 176, fig. 6 to 10.

*Hab.* Darnley Island, Torres Straits; found on sandy mud flats inside the reefs, at low water.

### 31.—VERTAGUS PULCHER.

*Vertagus pulcher*, A. Adams, in Sowerby Thes. Conch.
*Cerithium pulchrum* (Vertagus), Sowerby, Thes. Conch., vol. 2, p. 852, pl. 177, fig. 25.

*Hab.* Low Island, Trinity Bay, North-east Australia. One specimen found on the reefs. Nickol Bay, North-west Coast of Australia (Brazier).

### 32.—VERTAGUS LINEATUS.

*Cerithium lineatum*, Lam. Anim. Sans Vert., tome 7, p. 72.

" " Sowerby, Thes. Conch., vol. 2, p. 849, pl. 176, fig. 4-5.

*Vertagus lineatus*, Chenu. Manuel de Conch., par. 1, p. 283, fig. 1903.

*Hab.* Sue Island, Torres Straits; found on the reefs.

### 33.—VERTAGUS RECURVUS.

*Cerithium recurvum*, Sowerby, Thes. Conch., vol. 2, p. 854, pl. 176, fig. 16, 17, 18.

*Hab.* Albany Passage, Cape York, North Australia, 11 fathoms, sandy bottom.

### 34.—TRIPHORIS VIOLACEUS.

*Cerithium violaceum*, Quoy, Voy. de l'Astrolabe.

*Hab.* Palm, Barnard No. 3, Fitzroy, and Home Islands, North-east Coast of Australia; found under blocks of coral on the reefs. Makera Harbour, San Christoval, Solomon Islands. Nouméa, New Caledonia (Brazier).

### 35.—TRIPHORIS (INO) CORRUGATUS.

*Triphoris (ino) corrugatus*, Hinds, Ann. Mag. Nat. History, 1843, vol. 11, p. 18.

*Ino corrugatus*, Chenu. Manuel de Conch, par. 1, p. 284, fig. 1915-1916.

*Hab.* Bet Island, Torres Straits, 11 fathoms, sand and coral bottom. Darnley Island, Torres Straits, 15, 20, 30 fathoms, sand and sandy mud bottom.

### 36.—PYRAZUS SULCATUS.

*Murex sulcatus*, Born. Mus., p. 320.

*Cerithium sulcatum*, Brug. Encyclop,, pl. 442, fig. 2.

" " Lam. Anim. Sans Vert., tome 7, p. 66.

*Murex Molluccanus*, Gmel., p. 5363, No. 151.

*Terebralia sulcatum*, Swainson, Malacology, 1840, p. 315.

*Cerithium sulcatum* (Pyrazus), Sowerby, Thes. Conch., vol. 2, p. 883, pl. 185, fig. 262.

*Pyrazus sulcatus*, Reeve, Conch. Icon., vol. 15, Pyrazus, pl. sp. 1a.-1b.

„ „ Chenu. Manuel de Conch, par. 1, p. 285, fig. 1923.

*Strombus mangiorum*, Schroeter, Phys. Conch., p. 383.

*Hab.* Dungeness Island, Torres Straits; found on the roots of the mangrove (*Rhizophora.*)

The specimens figured 1a. and 1b. in Reeve's Conch. Icon. are the true Australian variety, and found in vast numbers on the above island.

## 37.—TELESCOPIUM FUSCUM.

*Trochus telescopium*, Linn. Gmel., p. 3585, No. 112.

*Telescopium fuscum*, Chem. Conch., p. 160, fig. 1507, 1509.

*Cerithium telescopium*, Lam. Anim. Sans Vert., tome 7, p. 67.

*Terebralia telescopium*, Swainson, Malacology, 1840, p. 315.

*Cerithium* „ Sowerby, Thes. Conch., vol. 2, p. 890, pl. 185, fig. 269.

*Telescopium Telescopium*, Chenu. Manuel de Conch., par. 1, p. 286, fig. 1930.

*Potamides* (*Terebralia*) *telescopium*, Woodward, Manual of Mollusca, 3rd edit., 1875, p. 243, pl. 8, fig. 21.

*Hab.* Katow River, New Guinea, on mud flats overgrown with *Rhizophora.*

## 38.—CERITHIDEA CHARBONNIERI.

*Cerithium Charbonnieri*, Petit. Journal de Conch, 1851, p. 264, pl. 7, fig. 7.

*Cerithidea Charbonnieri*, A. Adams, Proc. Zool. Soc., Lon., 1854, p. 84.

*Cerithium unicarinatum*, Metcalfe.

„ *Charbonnieri*, Sowerby, Thes. Conch., vol. 2, p. 886, pl. 186, fig. 279.

*Hab.* Hall Sound, Yule Island, New Guinea. One specimen found.

### 39.—CERITHIDEA KIENERI.

*Cerithium Kennerii*, Homb. et Jacq. Voy. au Pole Sud. Moll., text, p. 96. Atlas, pl. 23, fig. 4-5.

*Cerithium Kieneri*, Sowerby, Thes. Conch., vol. 2, p. 886, pl. 186, fig. 272.

*Cerithidea Kieneri*, Reeve, Conch. Icon., Cerithidea, pl. 1, sp. 6.

*Hab.* Cape York, North Australia. Found some six feet from the ground, attached by a glutinous matter on the trunks of large *Rhizophora*. Katow, New Guinea. One specimen found on the beach, dead.

### 40.—PIRENELLA LAYARDI.

*Cerithidea* (*Pirenella*) *Layardi*, A. Adams, Proc. Zool. Soc., Lon., 1854, p. 86.

*Cerithium Layardi* (Pirenella), Sowerby, Thes. Conch., vol. 2, p. 882, pl. 185, fig. 257.

*Tympanotomus Layardi*, Reeve, Conch. Icon., vol. 15, Tympanotomus, pl. 1, sp. 2a.

*Hab.* Mud Bay, Cape York; found on sandy mud flats at low water.

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## The Ichthyology of the Chevert Expedition, by HAYNES GIBBES ALLEYNE, M.D., and WILLIAM MACLEAY, F.L.S.

## II.

### FAMILY SCOMBRIDÆ.

### 55.—ECHENEIS NAUCRATES.

*Echeneis Remora*, Aldrovandi, 3, ch. 22, p. 355. Jonston, Thaumatogr. 1, lib. 1, cap. 2, art 4, tab. 4, fig. 3, tab. 39, fig. 8. Marcgr. Iter. Bras., p. 180. Gottorff, Kuntskammer, tab. 25, fig. 2. Willoughby, p. 119, tab. g. 8, fig. 2. Ray, Syn., p. 71. Ruych. Theatr. Univ. p. 7. tab. 4, fig. 3; tab. 39, fig. 8. Seba 3, p. 103, tab. 33, fig. 2. Dutertre, Hist. Gen. des Antilles, 2, p. 299, fig. opp. p. 222. Brown, Hist. Jamaica, p. 443.

*Echineis naucrates*, L. Syst., 1, p. 446, Hasselg., Iter. Palest., p. 324. Schœpff, Schrift., Gesselsch, Naturf. Freunde, Berlin 8, 3, p. 145. Bl. 2, p. 131, tab. 171. Bl. Schn., p. 239. Lacep. 3, pp. 146-162, pl. 9, fig. 2. Shaw Zool. 4, p. 209, pl. 31. Cuv. Regne. Anim. Storer Rep. Fish. Massach p. 153. Mich. Trans. Lit. and Phil. Soc. New York 1, p. 377. Richards Faun. Bor. Amer. 3, p. 266, and Ann. and Mag. Nat. Hist. 11, 1843, p. 498. Cant. Catal., p. 199. Faun. Japan. Pois., p. 270, p. 120, fig. 1. Richards Ichthyolog. Chin., p. 203. Guich. Explor. Alger. Poiss., p. 111. Webb and Berthall, Iles Canar. Poiss., p. 87. Gunth. Ann. and Mag. Nat. Hist., May, 1860, p. 395.

*Echineis*, sp. Gronov., Zoophyl, p. 75, No. 252, and Mus. Ichthyol. 1, p. 13, No. 34. Klein Miss. Pisc., 4, p. 41, No. 2.

*Pegador*, Parra, p. 94, pl. 36, fig. 2.

*Ala Mottah*, Russell, 1, p. 39, pl. 49.

*Echineis albicanda*, Mich. Am. Mon., Mag 2., p. 244.

„ „ *lunata*, Bancr. Proc. Comm. Zool. Soc. 1, p. 134, and Zool. Jour. S, p. 411, pl. 18.

„ *Australis*, Griff. Anim. Kingd., pl. —, p. 504; Bennett, Whal. Voy. 2, p. 273.

„ *vittata*, Lowe Proc. Zool. Soc., 1839, p. 89; 1850, p. 252, and Trans. Zool. Soc., p. 17.

„ *vittata*, Rüpp. N. W. Fische, p. 82.

„ *albicanda*, Dekay N. York Faun., Fishes, p. 307, pl. 54, fig. 177.

„ *fusca*, Gronov. Syst., ed. Gray, p. 92.

*Skeleton*, Agass., Recherches Poiss., Tass. 4, tab. G.

The above long list of references and synonyms is taken from Günther's Catalogue, and is no doubt very complete and correct. It will give an idea of the great amount of interest which this remarkable group of fishes has always excited among naturalists, and also illustrates the many mistakes authors have fallen into from their unacquaintance with the great diversity of appearance in these fish at different periods of their growth.

A number of large specimens, about thirty-two inches long, of this species accumulated round the Chevert, when lying at anchor for ten days off Darnley Island, and several were taken by the hook. They seemed generally to adhere to the sides of the ship near the bows by means of their suckers, but whenever anything edible or looking like it was thrown from the ship, a number of them would at once detach themselves and make a dash at it. These were all full-grown fish, and had slightly bilobed tails. Young specimens about seven inches long taken at Cape York and Warrior Reef present a very different appearance. The middle rays of the tail are elongate, and the outer rays of the tail and the tips of the first portion of the soft dorsal and anal are of a yellowish white. The number of plates on the suctorial disk is in one of the young specimens twenty-four, in all the others twenty-three.

## FAMILY CARANGIDÆ.

### 56.—CARANX ARMATUS.

*Sciœna armata*, Forsk., p. 53. Gm. L., p. 1306. Russell, pl. 151, p. 38 (Young).

*Citula plumbea*, Quoy and Gaim., Voy. Freyc. Zool. Poiss., p. 361.

„ *ciliaria*, Rüpp. Atl. Fische, p. 102, tab. 25, fig. 8.

„ *armata*, Rüpp. Atl. Fische, p. 103, and N. W. Fische, p. 50.

*Caranx citula*, Cuv. and Val. 9, p. 126.

„ *armatus*, Cuv. and Val. 9, p. 127; Cantor Catal., p. 131.

„ *ciliaris*, Cuv. and Val. 9, p. 129 (Young); Faun. Japan. Poiss., p. 112; Richards Ichth. China, p. 276.

„ *cirrhosus*, Cuv. and Val., pl. 250.

*Olistus malabaricus*, Cuv. and Val. 9, p. 137, pl. 251; Cuv. Regn. Anim., Ill. Poiss., pl. 58, fig. 1.

„ *Rüpellii*, Cuv. and Val. 9, p. 144.

*Carangoides citula*, Blecker Verh. Bat. Gen. 24, Makr., p. 65.

This species was found at Cape York and New Guinea.

### 57.—CARANX HIPPOS.

*Guara terebra*, Marcgr., p. 172; Seba, 3, 27, 3.

*Scomber hippos*, Linn. Syst. Nat. 1, p. 494 (not Mitch.); Bl. Schn., p. 28; Forst. Descr. Anim. cur. Licht., p. 192.

*Scomber hippos Kleinii*, Bl. taf. 347, fig. 2; Bl. Schn., p. 30. Russell 2, pl. 148.

*Caranx fallax*, Cuv. and Val. 9, p. 95; Castalu. Anim. Nouv. or Rares Poiss., p. 22; Guich. Poiss. in Sagra Hist. Cuba, p. 111.

„ *sem.* Cuv. and Val. 9, p. 105.

„ *Forsteri*, Cuv. and Val. 9, p. 107; Cant. Catal., p. 127. Bleeker Verh., &c.

„ *sexfasciatus*, Quoy. and Gaim. Voy. Freyc., p. 351, pl. 65, fig. 4; Cuv. and Val. 9, p. 110 (Young).

*Caranx Lessonii*, Cuv. and Val. 9, p. 113; Less. Voy. Coq. Poiss., p. 155, pl. 31, fig. 1.

„ *bellangerii*, Cuv. and Val. 9, p. 116.

„ *defensor*, Dekay, New York Fauna, p. 120, pl. 24, fig. 72; Holbr. Ichth. S. Carolin., p. 85, pl. 12, fig. 1 (eye too small).

„ *flavo-cœruleus*, Schleg. Faun. Japan., p. 110, pl. 59, fig. 2.

„ *parapistes*, Richards Ichthy. Voy. Erebus and Terror, p. 136, pl. 58, fig. 6, 7.

This fish was taken abundantly in the not about Cape York.

## 58.—Caranx Cheverti.

*Plate* X., *fig.* 1.

D. 8 $\frac{1}{26}$. A. 2 $\frac{1}{23}$.

Teeth viliform, exceedingly minute. Vomer prominent and toothed. Height of body nearly three and a half times in the total length. Head about one-fourth of the same. The maxillary* scarcely reaches the vertical from the anterior margin of the orbit. The lateral line is very slightly curved in front; the straight portion commences about the vertical from the posterior third of the soft dorsal fin, and is slightly keeled on the tail only. The dorsal fin is low, the first five rays being slightly elongate. The anal is similar to the dorsal. The pectoral fins reach to about the line of the third dorsal ray. There is a very distinct black spot between the lateral line and the root of the pectorals, a part of it being on the operculum. Coloration silvery blue above, silvery white below.

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* In the previous paper, where the term upper maxillary is used, the maxillary bone is meant.

One specimen, five inches long, of this well-marked species was got at Katow, New Guinea. The teeth are so very fine that it is difficult even with a lens to detect them.

### 59.—CARANX LATICAUDIS.

*Plate* X., *fig.* 2.

D. $8\frac{1}{26}$, A. $\frac{1}{25}$.

Fine viliform teeth on the jaws, vomer, and tongue. Height of body two and one-third in the total length. Head four and a-half in the same. Snout rounded, and distant from the eye more than the diameter of the orbit. The maxillary reaches to the vertical from the anterior margin of the orbit. Crest keeled. Breast naked. The lateral line is slightly curved, the straight and keeled portion commencing at about the vertical from the posterior fourth of the soft dorsal fin. Dorsal and anal fins low and uniform, the first five rays of each a little elongate. Pectoral fin one-third of the entire length of the fish. Caudal fin wide-spreading, and exceeding in height the whole body. Coloration silvery, darker on the back than below. The dorsal, anal, and caudal fins are slightly blackish. No opercular spot.

One specimen, twelve inches long, of this handsome fish was taken in Hall Sound.

Both this and the preceding species will fall into the subdivision of the genus *Caranx*, which Günther (Cat Fish, Brit. Mus., vol. 2, p. 424) commences with the species *Lioglossus*.

### 60.—CARANX PAPUENSIS.

*Plate* X., *fig.* 3.

D. $8\frac{1}{22}$, A. $2\frac{1}{17}$.

Viliform teeth on the upper jaw, with an outer series of larger and somewhat recurved ones; those on the lower jaw in a single series, small, and rather recurved. Teeth on the vomer. The height of the body is equal to a third, and the length of the head to a fourth of the total length. The maxillary reaches to the vertical from the anterior third of the eye. Breast scaly. The lateral line is moderately curved on its anterior half. The straight part is strongly keeled, commences about the vertical to the sixth dorsal ray, and is composed of thirty-five plates. The pectoral fins extend to the ninth keeled scale of the lateral line. No opercular spot. Colouration silvery, darker on the back.

This specimen seems to correspond in several points with *Caranx lepturus* Agass., a fish supposed to belong to the Atlantic. The differences in the relative proportions, as well as in the dentition, justify us, we think, in describing this as a new species, more especially as Günther seems to have doubts as to whether the fish described in his Catalogue (Vol. 2, p. 447) as *lepturus* is really Agassiz's fish.

Two specimens, the largest six inches long, were taken at Hall Sound, New Guinea.

### 61.—CARANX BUCCULENTUS.

*Plate* XI., *fig.* 1.

D. $8\frac{1}{18}$, A. $2\frac{1}{18}$.

The teeth in the upper jaw are viliform, with an external row of conical teeth, about fourteen in number. The under jaw has a single series of smaller conical teeth. Teeth on the vomer, palatines, and tongue; those on the vomer in a triangular mass. The height of the body is one-third of the total length. The head is a little shorter than the height of the body. The diameter of the orbit is one-fourth of the length of the head, and is equal to the distance from the eye to the front of the muzzle. The distance between the eye is much greater than the diameter of the orbit. Mouth large, the maxillary extending to the vertical from behind the middle of the eye. Breast naked. The lateral line is very much curved on its anterior portion, and descends vertically to the straight and plated portion which commences in the vertical from the *fifth dorsal spine.* The first few rays of the soft dorsal and anal fins are elongate. The pectorals reach the ninth anal ray. Colouration silvery, darker towards the back. The dorsal and caudal fins are tipped with black. There is a distinct black axillary spot, and an indistinct opercular one.

Two specimens, each ten inches long, were taken at Cape Grenville.

### 62.—Caranx georgianus.

Cuv. and Val. 9, p. 85; Jenyns Zool. Beagle, Fishes, p. 71; Richards Ann. and Mag. Nat. Hist., 1843, 11, p. 27; and Ichth. Voy. Ereb. and Terr., p. 135, pl. 58, fig. 1, 3.

*Caranx platessa*, Cuv. and Val., 9, p. 84.

This species, so well known in Port Jackson by the name of "White Trevally," seems to get less abundant in the warm seas of the North. Only one specimen was taken during the whole voyage of the Chevert, and that was in the comparatively cool latitudes of the Percy Islands.

### 63.—Caranx edentulus.

*Plate* XI., *fig.* 2.

D. $7\frac{1}{20}$, A. $2\frac{1}{16}$.

No teeth perceptible either on jaws, vomer, or tongue. The height of the body is one-third, and the length of the head is one-fourth of the total length of the fish. The lips are rather thick and fleshy. The maxillary reaches to the vertical from the anterior third of the orbit. The eyes are small, about two diameters from the point of the muzzle, and three diameters apart. There is a ridge above the eye to the summit of the operculum. Breast scaly. The lateral line is slightly curved for two-thirds of its length; the straight portion commences below the posterior third of the soft dorsal fin, and is very slightly armed. The pectoral fins reach to the sixth anal ray. The detached anal spines are small. The tail is long and spreading. The colouration is bluish above and yellowish white below. The opercular and axillary spots are indistinct.

This species seems to approach nearest to *Caranx Rüppellii* of Gunther, the *C. petaurista* Rüppell. Several specimens, averaging about fourteen inches in length, were got at the Percy Islands.

### 64.—CHORINEMUS LYSAN.

? Dampier, Voy. N. Holl., pl. 3, fig. 5, p. 162.

*Scomber lysan*, Forsk., No. 67, pl. 54.

„ *Fosteri*, Bl. Schn., p. 26.

*Scomberoides commersonianus*, Lacep., 2, pl. 20, fig. 3. Russell, 2, p. 31, pl. 141.

*Scomber Madagacериensis*, Shaw Zool. 4, p. 590, pl. 85. Bennett's Life of Raffles, p. 689.

*Lichia lysan*, Rüpp. Atl. Fische., p. 91.

*Chorinemus commersonianus*, Cuv. and Val. p. 370. Bleek Verh. Bat. Gen. 24, Makr., p. 44.

*Chorinemus lysan*, Cuv. and Val. 1, p.387. Rüpp., N. W. Fisch., p. 44. Cant., Catalog., p. 118.

? *Chorinemus farkharii*, Cuv. and Val., 8, p. 388.

*Chorinemus aculeatus*, Cuv. and Val. 8, p. 384 (not Block.)

„ *Fosteri*, Richards Ann. and Mag. Nat. Hist., 1843, 11, p. 24.

This fish was taken on several occasions in the net at Cape York.

### 65.—CHORINEMUS TOLOO.

*Toloo parah*, Russell 2, p. 29, pl. 137.

*Lichia-toloo-parah*, Rüpp. Atl. Fische, p. 91.

*Chorinemus toloo*, Cuv. and Val. 8, p. 377. ? Bleek. Verh. Bat. Gen., 24, Makr. p. 45.

The description given by Gunther of this species does not accord very well with the specimens before us; but Count Castelnau mentions in a paper published by him, entitled "Researches on the Fishes of Australia," that he had received from South Australia a fish which is evidently identical with the fish before us, and he seems inclined to think that it is C. *toloo*. It seems curious that it should not have been previously noticed from Northern Australia, for it is very abundant about Cape York. There are in the collection from the same locality some small fishes (three inches long) which present a marked difference of appearance, but we are inclined to believe that they may be only immature specimens. They are very compressed, have a crenulated appearance about the belly, corrugated lines on the sides, and are of the most brilliant silvery lustre.

### 66.—TRACHYNOTUS OVATUS.

*Gasterostous ovatus*, L. Syst. Nat. 1, p. 490.

*Centronotus ovals*, Lacep. 3, pp. 309-316.

Synonomy of Atlantic specimens.

*Chætodon rhomboides*, Block, taf. 209.

*Acanthinion rhomboides*, Lacep. 4; p. 500.

*Spinous Dorey*, Mitch. Trans. Lit. and Phil. Soc. New York, 1 pl. 6, fig. 10.

*Trachinotus rhomboides*, Cuv. and Val. 8, p. 407. Guich. Sagra, Cuba, p. 108.

*Trachinotus fuscus*, Cuv. and Val. 8, p. 410.

„ *teraia*, Cuv. and Val. 8, page 418.

„ *spinosus*, Dek. New York Faun. Fishes p. 117, pl. 19, fig. 53 (bad).

*Lichia spinosa*, Baird, 9th Smith's Rep., p. 336.

*Doliodon spinosus*, Girard Proc. Acad. Nat. Sc., Philad., 1858, p. 168.

Synonomy of the Indian specimens.

*Scomber falcatus*, Forsk. p. 57.

*Cæsiomorns Blockii*, Lacep. p. 95, pl. 2, fig. 2.

*Trachinotus falcatus*, Lacep. 3, p. 79. Rüpp. Atl. Fische., p. 89. Cuv. and Val. 1, page 430.

*Mookalee parah*, Russell 2, p. 39, pl. 154.

*Trachinotus mookalee*, Cuv. and Val., 8, p. 423, Cantor Catal., p. 123. Bleeker Verh. Bat. Gen. 24. Makr., p. 48.

*Trachinotus Blockii*, Cuv. and Val. 8, p. 425.

„ *affinus*, Cuv. and Val. 8, p. 428.

„ *falciger*, Cuv. and Val. 8, p. 428.

„ *drepanis*, Cuv. and Val. 8, p. 429.

„ *auratus*, Richards Ichth. Chin., p. 270.

It will be seen from the foregoing long list of synonyms, taken from the British Museum Catalogue, that Dr. Gunther has merged in one no less than nine of Cuvier and Valenciennes' species.

The specimens in the Chevert collection are from the Percy Islands.

### 67.—TRACHYNOTUS BAILLONII.

Russell 2, pl. 142.

*Cæsiomorus bailloni*, Lacep. 3, p. 93, pl. 3, fig. 1.

„ *quadripunctatus*, Rüpp. Atl. Fische, p. 90, pl. 24, f. 1.

*Trachinotus bailloni*, Cuv. and Val. 8, p. 431 ; Bleek. Verh. Bat. Gen. 24, p. 46.

„ *quadripunctatus*, Cuv. and Val. 8, p. 434 ; Cantor Catal., p. 122.

„ *Russellii*, Cuv. and Val. 8, p. 436.

This species was also got at the Percy Islands.

### 68.—PLATAX TEIRA.

*Chætodon teira*, Forsk., p. 60, tab. 22 ; Bl., tab. 199, fig. 1 ; L. Gm., p. 1265 ; Bl. Schn., p. 221 ; Shaw. Zool. 4, p. 365, pl. 260 ; Russell, pl. 87.

*Platax teira*, Cuv. Regne. Anim ; Rüpp. Atl. Fische, p. 68, and N. W. Fische, pp. 33-37 ; Cuv. and Val. 7, p. 226 ; Cantor Catal. p. 168 ; Bleek. Verh. Bat. Gen. 23, Chætod. p. 28 ; Peters. Wiegm. Archiv. 1855, p. 247.

„ *Leschenaldi*, Cuv. and Val. 7, p. 223.

„ *vespertilio*, Temm. and Schlgg. Faun. Japan, Poiss., p. 83, pl. 43.

One large specimen of this curious-looking fish was speared under the ship's side in Hall Sound, New Guinea.

## FAMILY GOBIIDÆ.

### 69.—GOBIUS CRINIGER.

? *Gobius nebulosus*, Forsk., p. 24 ; Bl. Schn., p. 72 ; Cuv. and Val. 12, p. 84.

*Gobius criniger*, Cuv. and Val. 12, p. 82; Cant. Catal., p. 184; Bleeker Banka., p. 453; Richard's Voy. Ereb. and Terror, Ichthy. p. 2, pl. 1, fig. 3-4.

Taken at Darnley Island.

### 70.—GOBIUS ORNATUS.

*Gobius ornatus*, Rüpp. Atl. Fische., p. 135, and N. W. Fische, p. 137.

,, *ventralis*, Cuv. and Val. 12, p. 113.

,, *interstinctus*, Richard's Voy. Ereb. and Terror, Fishes, p. 3, pl. 5, fig. 3-6; Bleek. Natursk. Tydsch. Ned. Ind., 1851, 1, p. 249.

One specimen, in a very bad condition, from Darnley Island; we are not by any means certain of its identity.

### 71.—GOBIUS DARNLEYENSIS.

*Plate* XII., *fig.* 1.

D. $6\frac{1}{9}$ A. $\frac{1}{8}$ L. lat. 34.

All the teeth small. The height of the body is one-fifth of the length. The length of the head is the same. The eyes are half the diameter of the orbit apart, and one diameter from the point of the snout. The cleft of the mouth is slightly oblique, and extends to the vertical from the middle of the eye. The tail is long and obtusely pointed. The anal rays are longer than those of the soft dorsal. The pectorals are large and obtusely pointed, with the first few rays filamentose. The scales are much larger towards the tail. Coloration, greenish marbled and spotted with black. The fins and tail are greenish yellow, with their basal portions blackish. The position of the lateral line is marked by a ridge anteriorly, and a depressed line posteriorly.

This fish was found in considerable abundance in and about dead coral at Darnley Island. The average length is about four inches.

### 72.—GOBIUS NIGRIPINNIS.

*Plate* XII., *fig.* 2.

D. $6\frac{1}{10}$ A. $\frac{1}{8}$ L. lat. 33.

Teeth small, conical ; an exterior row in the upper jaw longer than the others. The height of the body is one-sixth of the total length, and the length of the head is one-fourth of the same. The eyes are about the diameter of the orbit apart, and are about the same distance from the intermaxillary. The head is obtuse in front, and the mouth is slightly oblique. The scales are rather large towards the tail, which is long and obtusely pointed. The colour is greyish black. The fins are all more or less black. The dorsals are tipped with yellow.

This species was found at Palm Island. The length is about three inches.

There are a number of other species of *Gobius* in the collection which we find ourselves compelled to pass over for the present; some because they are represented only by single or imperfect specimens, and others from an inability to satisfy ourselves that they had not been previously described by others.

### 73.—APOCRYPTES LINEATUS.

*Plate* XII., *fig.* 3.

D. $6\frac{1}{15}$ A. $\frac{1}{13}$ L. lat. 64.

Teeth distinct, conical, and sharp ; those on the lower jaw nearly horizontal with a recurved canine on each side. Height of body one-fourth of the length ; length of head one-fifth of the same. Scales becoming much larger towards the tail. Caudal fin obtusely pointed. Colouration, dirty white, with two black bands—one extending from the muzzle through the eye to the anterior third of the soft dorsal fin,—the second through the operculum and base of the pectoral fin to about the middle of the body. The first dorsal fin has a black patch extending more or less along its entire base ; the second dorsal has four elongate black basal spots extending to the body. There is also a well-marked spot at the base of the caudal fin.

This fish was taken in abundance at Cape Grenville. It seems to be very subject to variation. Some specimens are much more elongate than the one described, the height of the body being six times in the length, and many of them have two canines close together on one side of the lower jaw, though curiously enough we have never been able to detect them on both sides in any specimen. The average size of the species is three and a-half inches.

### 74.—GOBIODON VERTICALIS.

*Plate* XII., *fig.* 4.

D. $6\frac{1}{10}$, A. $\frac{1}{9}$,

Body very compressed. Profile vertical, with the mouth small and nearly in the centre. Eyes small and near the top of the head. Height of body nearly one-half of the total length. Ventral fins short. The body shows two longitudinal impressions —one near the back, the other near the belly, and the transverse lines of the muscles are very distinct. The colour is yellow, with all the fins more or less black.

This fish was found abundantly in the inmost recesses of dead coral, in positions where it had probably been born, and from which there could certainly have been little chance of escape. *Gobiodon histrio*, Cuv. and Val., is the nearest approach to this species of all those hitherto described. The much greater proportionate depth of *G. verticalis*, and the absence of tubercules on the forehead, will at once serve to distinguish them.

### 75. —GOBIODON CERAMENSIS.

*Gobius ceramensis*, Bleek, Ceram. 2, p. 704.

A good many specimens of what we believe to be this species were found in the same localities, and under the same circumstances as the preceding species. Its proportions are very different, and the profile is not vertical,

### 76.—PERIOPTHALMUS AUSTRALIS.

*Plate* XI., *fig.* 3.

Casteln., Researches on the Fishes of Australia, p. 22.

As no figure has ever been given of this remarkable fish, we add one in the plates accompanying this paper. It was found to be abundant about Cape York, at the mouth of the Katow River, and at the mouths of all the streams flowing into Hall Sound. At low tide these fish are met with on the slimy banks and mangrove swamps at a considerable distance from the water, but they invariably make for it in a straight direction whenever they are frightened or disturbed by anyone. Their mode of progression is by a series of rapid jumps, springing apparently entirely from their very muscular pectoral fins.

### 77 —PERIOPTHALMUS KOELREUTERI.

Valent. 3, p. 391, fig. 140; Renard. 1, p. 16, fig. 65; Saba. 3, p. 29, fig. 17; Koelreuter in Nov. Comm. Petrop. 8, p. 421.

*Gobius Koelreuteri*, Pall. Spic. 8, p. 8, tome 2, fig. 1.

*Periophthalmus Koelreuteri*, Bl. Schn., p. 65.

Gunther describes five varieties of this species, reducing to synonyms several species of Cuv. and Val., Cantor, Richardson, and others. The specimens in the "Chevert" collection were taken near the mouth of the Katow River, where they seemed to be very numerous.

### 78.—ELEOTRIS LINEATA.

Castelnan, Researches on the Fishes of Australia, p. 24.

Found at Darnley Island.

### 79.—ELEOTRIS ELONGATA.

*Plate* XIII., *fig.* 1.

D. $7\frac{1}{23}$, A. $\frac{1}{18}$.

Height of body, one-tenth of the length. Head broad and flat between the eyes. Mouth oblique, the maxillary extending to the vertical from the anterior third of the eye. Scales minute.

Tail pointed. Colour, pale reddish yellow, with a narrow black axillary spot.

This species was also taken at Darnley Island.

## FAMILY BATRACHIDÆ.

### 80.—BATRACHUS DIEMENSIS.

*Batrachoides Diemensis*, Lesueur, Journ. Acad. Nat. Sc. Phil. 3, 1823, p. 402.

*Batrachus quadrispinis*, Cuv. and Val. 12, p. 487.

„ *Diemensis*, Richards, Ann. Nat. Hist. 10, p. 352; Voy. Ereb. and Terr., Fishes, p. 17, pl. 8, fig. 1-2; Bleek, Tim., p. 168.

Taken at Cape Grenville, and generally throughout Torres Straits.

### 81.—BATRACHUS DUSSUMIERI.

Cuv. and Val. 12, p. 474, pl. 367.

One specimen, which we believe may be this species, was taken at Darnley Island, but it does not much resemble the figure given in Cuvier and Valencienne's plates.

### 82.—BATRACHUS DUBIUS.

White, Voy. New South Wales, p. 265; Richards, Voy. Ereb. and Terr., Fishes, p. 16, pl. 10.

One specimen from Sue Island, Torres Straits.

## FAMILY PEDICULATI.

### 83.—ANTENNARIUS UROPHTHALMUS.

*Chironectes caudimaculatus*, Richards, Voy. Ereb. and Terr., Fishes, p. 125, pl. 60, fig. 8, 9.

*Antennarius urophthalmus*, Bleek, Natuurk. Tydschr. Mdell. Ind. 2, p. 488 and 15, p. 237.

One specimen, Darnley Island.

## FAMILY BLENNIIDÆ.

### 84.—SALARIAS LINEOLATUS.

*Plate* XIII., *fig.* 2.

D. 31, A. $\frac{2}{21}$.

of the body is one-fourth of the length. The head
ir front, with a long bifid tentacle above the orbit, a
a the anterior nostril, and a short broad-fringed one
uth is rather large. There
is high, without notch, and
The colour is a yellowish
and dorsal fin, and with a
a al blue lines on the body.

### 85.—S ASCIATUS.

*Blennius gattorugine*, For r. Anim., p. 23.
„ *fasciatus*, Cuv. a. 11, p. 324.
„ taf. 162, fig. 1. ., p. 168.
*Salarias quadripinnis*, Rupp. Atl. Fische., p. 112, taf. 28, fig. 2. Cuv. and Val., 11 p. 318. Bleek. Verh. Bat. Gen. 22, p. 19.
*Salarias fasciatus*, Cuv. and Val. 11, p. 324.
„ *priamensis*, Bleek, Sumatra, 2 p. 268.

From Cape Grenville.

### 86.—SALARIAS BISERIATUS.

Cuv. and Val. 11, p. 316. Kner. Fische. Novara, p. 197, pl. 8, fig. 5.

This species is not in Gunther's catalogue. A few specimens were taken at Nepean Island in Torres Straits.

### 87.—SALARIAS GEMINATUS.

*Plate* XIII., *fig.* 3.

D. $\frac{12}{23}$ A $\frac{2}{22}$

The height of the body is one-seventh of the total length. The head is vertical in front, with a rounded crest on the occiput. The eyes are near one another, and have a fringed tentacle on the summit of the orbit. No canine teeth. Dorsal fin deeply notched, and continuous with the caudal; the latter is pointed. The colour is yellow, with seven or eight faint blue or black bands disposed in pairs across the body, and a distinct black edge to the dorsal, anal, and caudal fins.

This is a remarkably elongate form of Blennidæ. It is from some part of Torres Straits.

### 88.—SALARIAS IRRORATUS.

*Plate* XIII., *fig.* 4.

D. $\frac{12}{16}$ A. 18.

The height of the body is one-fifth of the total length. The profile of the head is rounded, the forehead and eyes being in advance of the mouth. The eyes are about one-third of the diameter of the orbit apart. There is a short simple tentacle above each eye, and a very low continuous crest on the top of the head, extending to the dorsal fin. No canine teeth. The dorsal fin is slightly notched, commences at the occiput, and is not continuous with the caudal. The rays of the anal fin are longer than those of the dorsal, and terminate in filaments. The colour is pale reddish brown, thickly sprinkled with small white spots. The fins are nearly white—the anal tipped with black, the caudal spotted, the pectorals with basal white spots.

One specimen was found at Low Island.

### 89.—SALARIAS FILAMENTOSUS.

*Plate* XIV., *fig.* 1.

D. $\frac{12}{20}$ A $\frac{2}{20}$

Height of body, one-third of the length. Head rounded, sloping above, nearly vertical in front, with a deep groove on the occiput. No canine teeth. Tentacles above each eye and on every nostril. Dorsal fin moderately notched; the spines elongate, and terminating in filaments; the rays near the extremity longest.

The two anal spines are terminated each by a broad tentacular appendage—the anal rays are shorter than these of the dorsal. Tail somewhat rounded. Colour entirely black.

There is much that is anomalous and unlike a *Salarias* in this fish, but yet there seems to be no valid reason for removing it from that genus. It was captured at Cape York.

### 90.—SALARIAS AURIDENS.

*Plate* XIV., *fig.* 2.

D. $\frac{13}{21}$ A. $\frac{2}{21}$

Height of body, one-fifth of the length. Head horizontal above, vertical in front. A long tentacle, divided at the point, over each eye. Teeth very minute, and of a golden lustre. No canines. Dorsal fin deeply notched. Colour brown. Fins yellow—the dorsal, pectorals, and caudal, spotted with brown.

One specimen from Darnley Island.

### 91.—SALARIAS CRISTICEPS.

*Plate* XIV., *fig.* 3.

D. $\frac{13}{21}$ A. $\frac{2}{22}$

Height of body, one-sixth of the length. Profile of head vertical, the forehead rather more prominent than the mouth. A low crest on the top of the head. A large erect tentacle on the summit of each orbit, and a small tentacle on each anterior nostril. Dorsal fin deeper than the anal, and notched almost to the back. Colour of the body, almost black ; of the fins, diaphanous black. Tail broadly rounded.

This species also comes from Darnley Island.

## FAMILY TEUTHIDIDÆ.

### 92.—TEUTHIS ALBOPUNCTATA.

*Amphacanthus albopunctatus*, Schleg. Faun. Japan. Poiss. p. 128.

*Amphacanthus margaritiferus*, Rich. Ichth. Chin., p. 243.

*Amphacanthus fuscescens*, Rich. Ichth. Chin., p. 243.

„ *dorsalis*, Bleek. Verh. Batav. Genootsch. 23. Teuth. p. 9, and Java 4, p. 332.

*Teuthis brevirostris*, Gronov. Syst. Gray, p. 142.

The specimens obtained of this fish were speared by the natives on the reefs at Cape Grenville.

### 93.—TEUTHIS VERMICULATA.

*Amphacanthus vermiculatus*, Cuv. and Val. 10, p. 126. Müll. and Schleg. Verh. Overz. Bez. Vissch., p. 11, pl. 3, fig. 2. Bleek. Verh. Batav. Genootsch. 23, Teuth. p. 11.

Taken in Trinity Bay.

### 94.—TEUTHIS NOTOSTICTA.

*Amphacanthus notostictus*, Rich. Ann. and Mag. Nat. Hist., 1843, 11, p. 172.

One specimen, Darnley Island.

### 95.—TEUTHIS DOLIATA.

*Siganus doliatus*, Cuv. Regne, Anim. Guerin. Iconog. Poiss., pl. 35, fig. 1.

*Amphacanthus doliatus*, Cuv. and Val. 10, p. 132. Cuv. Regne, Anim. Ill. Poiss., pl 71, fig. 1. Bleek. Ternate, 2, p. 606.

One specimen, Fair Cape.

## FAMILY ACRONURIDÆ.

### 96.—NASEUS UNICORNIS.

*Monoceros piscis*, Willughby, 150, t. 0-4.

„ *minor*, Willughby, p. 216.

*Chaetodon*, *sp.*, Hapelg. Iter Palaest., p. 332, No. 71.

„ *unicornis*, Forsk., p. 63, and Icon. t. 23. L. Gm. 1, p. 1268.

*Monocerus Raii*, Bl. Schn., p. 181.

„ *biaculeatus*, Bl. Schn., p. 180, t. 42.

*Naso fronticornis*; Lacep. 3, pp. 105-106, pl. 7, fig. 2.

*Acanthurus unicornis*, Shaw Zool. 4, p. 374, pl. 50.

*Aspisurus unicornis*, Rüpp. Atl. Fische., p. 60.

*Naseus fronticornis*, Cuv. and Val. 10, p. 259. Faun. Japon. Poiss., p. 129, pl. 69. Richards Ichth. Chin., p. 244. Bleek. Batav. 3, p. 238. Cuv. Regne Anim, Ill. Poiss., pl. 72, fig. 2.

*Naseus longicornis*, Cuv. in Guer. Iconogr. Poiss., pl., 35, fig. 3.

*Harpurus monoceros*, Forst. Descr. Anim., ed. Licht., p. 219.

*Acronurus Ægyptius*, Gronov. Syst., ed. Gray, p. 191.

„ *corniger*, Gronov. Syst., ed. Gray, p. 192.

One fine specimen, nearly two feet long, was taken at Bramble Cay.

### 97.—NASEUS ANNULATUS.

*Priodon annulatus*, Quoy. and Gaim. Voy. Uran. Zool., p. 377. (young.)

*Naseus marginatus*, Cuv. and Val. 10, p. 280, adult.

*Priodon annularis*, Cuv. and Val. 10, p. 302, pl. 294 (young.) Bleek. Amboyna 2, p. 558.

*Naseus annulatus*, Bleek. Celeb. 8, p. 304.

An adult specimen, ten inches long, and without any trace of a ring on the tail, was caught at Cape Grenville.

## FAMILY ATHERINIDÆ.

### 98.—ATHERINA LACUNOSA.

*Atherina Waigiensis* (part) Quoy and Gaim. Voy. Uran. Zool. p. 334.

*Atherina lacunosa*, Bleek, Sumatra, p. 504 (probably not Forst. or Val.)

The exact locality in which this fish was found has not been noted, but it was most probably at Cape York.

### 99.—ATHERINA PINGUIS.

Lacep. 5, p. 372, pl. 11, fig. 1. Bleek. Act. Soc. Indo-Nederl. 8, Sumatra 8, p. 24.

*Atherina affinis*, Beun. Proc. Comm. Zool. Soc. 1, 1831, p. 166.

*Atherina pectoralis*, Cuv. and Val. 10, p. 447.

Found abundantly at Hall Sound. It may prove to be a new species.

## Family Mugilidæ.

### 100.—Mugil axillaris.

? *Mugil axillaris*, Cuv. and Val. 11, p. 131.

*Mugil axillaris*, Bleek. Natursk. Tijdschr. Nederl. Ind. 4, 1853, p. 266, and Act. Soc. Indo-Nederl. 8, Sumatra, 9, p. 3.

*Mugil parsia*, Bleek. Natursk. Tijdschr. Nederl. Ind. 3, 1852, p. 166.

This species was frequently taken in the seine at Yule Island, Hall Sound.

### 101.—Mugil delicatus.

*Plate* XV., *fig.* 1.

D 4$\frac{1}{8}$ A$\frac{3}{8}$ L. lat. 37.

Height of the body at its deepest part behind the first dorsal fin, four and a half times in the length. The length of the head is five and a half in the same. Head broad, flat above, the width of the interorbital space being more than half the length of the head. Snout short and obtuse. The free space at the chin between the mandibles is narrowly lanceolate. Eye without an adipose membrane. There are twenty-one series of scales between the snout and the spinous dorsal. The pectorals extend beyond the origin of the dorsal, but scarcely to the extremity of the ventrals. The soft dorsal and anal are scaly and falcate, the latter slightly the longest. The caudal fin is strongly forked, with the upper lobe the longest, and is slightly tipped with black. The general colouration is bright silvery, slightly darker on the back, and with a black spot and elongate scale on the upper part of the axil.

This species was very abundant about Cape York.

Of the many species of *Mugil* with which Australia abounds, all of high reputation as edible fishes, this is decidedly the best.

Another large scaled and very excellent *Mugil* was taken frequently by the seine in the same place, but unfortunately those which were kept for specimens were so injured in the rough passage across the Gulf of Papua as to become completely useless.

## ORDER II.

### ACANTHOPTERYGII PHARYNGOGNATHI.

### FAMILY POMACENTRIDÆ.

### 102.—AMPHIPRION PERCULA.

*Tetragonopterus*, No. 5, Klein. Pisc. Miss. 4, p. 38, t. 11, fig. 8. Seba. 3, p. 62, t. 26, fig. 20.

*Perca*, sp., Tyson in Philos. Trans. 56, p. 247, t. 7, fig. 8.

*Anthias polymna*, var. Bl. t. 316, fig 3.

*Lutjanus polymnus*, var. Lacep. 4, p. 224.

„ *percula*, Lacep. 4, pp. 239-248.

*Amphiprion percula*, Cuv. and Val. 5, p. 397. Bleek. Amb. and Cer. p. 287. Schleg. Overz. Amph. and in Verh. Nat. Gesch. Nederl. Overz. Bezitt. p. 19. Steindachner. Verh. Zool. Bot. Gisellsch. Wien., 1861, p. 78.

*Amphiprion tunicatus*, Cuv. and Val. 5, p. 399, pl. 132, fig. 2. Less. Voy. Coq. Zool. Poiss. p. 192, pl. 25, fig. 3.

*Amphiprion ocellaris*, Cuv. and Val. 5. p. 399.

„ *melanurus*, Cuv. and Val. 5, p. 400.

Found at Darnley Island.

### 103.—POMACENTRUS LITTORALIS.

*Pomacentrus littoralis*, Cuv. and Val., 5, p. 425; Schleg. Overz. Amphipr., &c., in Verh. and Nat. Gesch.; Nederl. Overz. Bezibt, p. 20, tab. 4, fig. 3; Bleek. Batav., p. 483.

„ *pristiger*, Cuv. and Val. 9, p. 506.

„ *hogoluensis*, Hombr. and Jacqu. Voy. Pole Sud Poiss., p. 47, pl. 5, fig. 3.

? *Pristotis fuscus*, Bleek. Verh. Batav.; Genootsch 22, Bali, p. 9.

A pretty generally distributed species. Specimens were obtained at Cape Grenville and the Palm Islands.

### 104.—POMACENTRUS CHRYSURUS.

*Chætodon chrysurus*, Broussouet.
*Pomacentrus chrysurus*, Cuv. and Val. 5, p. 423.
Common at Darnley Island.

### 105.—POMACENTRUS OBSCURUS.

*Plate* XV., *fig.* 2.

D. $\frac{13}{13}$, A. $\frac{2}{13}$. L. lat. 26.

Height of body twice and three-fourths in the total length. Præoperculum and infra orbital strongly denticulated. The dorsal fin increases gradually in height posteriorly. Caudal emarginate. Colouration greenish brown, with the ventral and anal fins black, and a black spot margined anteriorly with white above the root of the tail.

This species has some resemblance to *P. littoralis*. The exact locality of its capture has not been recorded.

### 106.—GLYPHIDODON BANKIERI.

*Glyphisodon Bankieri*, Rich. Ichth. Chin., p. 253.
„ *nemurus*, Bleeker, Borneo 2, p. 73.
Found at Cape Grenville.

### New Genus, HEPTADECANTHUS.

Body high, compressed. Præoperculum and infraorbital finely serrated. Teeth conical, in a single series, with minute teeth between. Dorsal fin with seventeen spines, anal with two. Scales moderate. The lateral line extends to the commencement of the soft dorsal. Gills, three-and-a-half. Pseudobranchiæ.

### 107.—HEPTADECANTHUS LONGICAUDIS.

*Plate* XV., *fig.* 3.

D. $\frac{17}{13}$, A. $\frac{2}{13}$.

Height of body more than half the length without the tail. Snout shorter than the diameter of the eye. Mouth small and oblique. Forehead convex between the eyes, and about equal in width to the orbit. The soft dorsal and anal fins pointed behind; the caudal long and deeply forked; the pectorals long, reaching almost to the anal. Colouration dark brown (probably violet in fresh specimens) as far as a line from the commencement of the soft dorsal to the anal spines, behind that grey. The soft dorsal, anal, pectoral, and caudal fins are more or less spotted with brown.

Several specimens were captured at Cape Grenville.

## FAMILY LABRIDÆ.

### 108.—CHAEROPS CYANODON.

*Labrus cyanodus*, Richards. Ann. and Mag. Nat. Hist., 1843, 11, p. 355.

*Lachnolaimus cyanodus*, Richards. Voy. Ereb. and Terr. Fishes, p. 131, pl. 55, fig. 5.

Cape Grenville, speared by the natives on the reefs.

### 109.—CHAEROPS CEPHALOTES.

Castelnau, Researches on the Fishes of Australia, p. 39.

Also speared at Cape Grenville.

### 110.—CHAEROPS NOTATUS.

*Plate* XVI., *fig.* 1.

Teeth green; no posterior canine tooth. Præoperculum very minutely serrated. Head as high as long. Prœorbital very high. Scales on the cheek small, numerous, and slightly imbricate. L. lat. 29. Colouration greenish yellow, with a pale blue or pearly centre to each scale; a blue band from the muzzle through the upper part of the eye to the summit of the operculum, another beneath the eye to the operculum below the first, a third much curved from the angle of the mouth to the operculum at the base of the pectoral fin, and a fourth along the edge of the operculum. There is a large black spot on the back at the base of the last two dorsal spines, and three blue lines on the anal fin.

This species seems to resemble *C. ommopterus* in some respects; but it cannot be the same, unless the description given of that fish in Gunther's Catalogue is very far from correct.

Speared by the natives at Cape Grenville.

### 111.—Stethojulis Strigiventer.

*Julis strigiventer*, Benn. Proc. Zool. Soc., 1832, p. 184; Cuv. and Val. 13, p. 468; Bleek. Banda 1, p. 251.

*Stethojulis strigiventer*, Gunth. Ann. and Mag. Nat. Hist., 1861, 8, p. 386; Bleek. Atl. Ichth, p. 135, tab. 43, fig. 1.

One specimen was taken at Low Island. It is without a posterior canine tooth.

### New genus, Cheilolabrus.

Body oblong, compressed. Head compressed, obtuse, and moderately elevated, with numerous non-imbricated scales on the cheek. Two strong prominent canine teeth in each jaw in front, the upper pair longest, with a series of short strong obtuse molar-like teeth on each jaw behind. Præoperculum entire. Mouth very protractile. Lips thick and fleshy, the under one forming two large reflected flaps. Scales rather large, smaller on the thorax. Lateral line dislocated but continuous. Dorsal spines eight. Gills three and a half.

### 112.—Cheilolabrus magnilabris.

*Plate* XVI., *fig.* 2.

D. $\frac{8}{10}$, A. $\frac{2}{10}$, L. lat. 28.

Height of body one-third of the length. Head nearly the same. Distance between the eyes nearly double the diameter of the orbit. Tail subtruncate. All the upper part of the body is of dark brown, the breast orange, and the scales towards the tail have each a blue spot. The head in front is marked by a number of blue streaks, and there is a large blue patch behind the eye. The soft dorsal and anal fins have numerous oblique blue streaks. The lateral line descends perpendicularly on two scales opposite the posterior third of the soft dorsal, and terminates on the tail at the third scale from the last.

This fish was obtained from the natives at Darnley Island.

### 113.—Pseudoscarus rivulatus.

*Scarus fasciatus*, Cuv. and Val. 14, p. 222.

„ *rivulatus*, Cuv. and Val. 14, p. 223.

*Scarus rivulatoides*, Bleek. Verhand. Batav. Gen. 22, Labr. Cyll., p. 55.

„ *micrognathius*, Bleek. l. c., p. 56.

*Pseudocarus rivulatus*, Bleek. Atl. Ichth., p. 44, tab. 9, fig. 3.

Got from the natives at Cape Grenville.

### 114.—PSEUDOSCARUS FLAVOLINEATUS.

*Plate* XVI., *fig.* 3.

Two series of scales on the cheek—the lower with six scales, and two scales on the præopercular limb. Upper lip nearly covering the jaw, which is white. Two horizontal conical teeth on the back part of the upper jaw, and one on the lower. Thirteen pectoral rays. Dorsal spines equal. Colouration, greenish olive towards the back; greenish yellow below, with many undulating longitudinal yellow streaks about the mouth and forehead. The soft dorsal is spotted with yellow at the base, and has a long ovate brown-edged spot between each ray. Both it and the anal fin have a submarginal dark streak with a pale margin.

Procured from the aborigines at Cape Grenville. With one or two exceptions all the Labridæ of the expedition were got in the same way.

### 115.—PSEUDOSCARUS NUDIROSTRIS.

*Plate* XVII., *fig.* 1.

More elongate than the preceding species. Two series of scales on the cheek, and two scales on the præopercular limb. Jaws, whitish, almost entirely uncovered by the lips. No lateral horizontal teeth. Fourteen pectoral rays. Dorsal spines equal. Caudal fin subtruncate, a little lobed at the upper angle. Colouration, olive above, golden yellow below, with a submarginal dark streak on the soft dorsal and anal fins, and a large brown spot on the upper and lower terminal scale on the tail.

*Hab.* Cape Grenville.

## ORDER III.

## ANACANTHINI.

### FAMILY OPHIDIIDÆ.

### 116.—FIERASFER HOMEI.

*Oxybeles Homei*, Richards. Voy. Ereb. and Terr., Fishes, p. 74, pl. 44, figs. 7-18.

„ *brandesii*, Bleek, Verh. Batav. Genootsch 24, Chiroe., &c., p. 24, Natuurk. Tydschr. Nederl. Ind. 1, p. 276, figs. 1-3-7, pp. 162-495.

Two specimens of this fish were vomited by a Holothuria dredged in Trinity Bay. The species was first described by Richardson, from a specimen presented by Sir Edward Home to the College of Surgeons, which had been got in the same way from a *Holothuria*, dredged up at Timor. Gunther's Catalogue mentions eight other species of this remarkable genus, and it would appear from what is known of their habits that they all obtain their living within the body of Echinodermata, though it is still a matter of doubt whether they occupy the respiratory or digestive cavities of their hosts.

### FAMILY PLEURONECTIDÆ.

### 117.—PARDACHIRUS PAVONINUS.

*Achirus pavoninus*, Lacep. 4, pp. 658-661. Cant. Cat., p. 225. Bleek. Verh. and Batav. Gen. 24, Pleuron., p. 18.

*Pleuronectes pavoninus*, Shaw. Zool. 4, p. 310.

Found at Cape Grenville and at Cape York.

## ORDER IV.

## PHYSOSTOMI.

### FAMILY SILURIDÆ.

### 118.—CNIDOGLANIS LEPTURUS.

Gunth. Cat. Fishes, Brit. Mus., vol. 5, p. 28.

Locality of capture not noted.

### 119.—ARIUS THALASSINUS.

*Deddi jella*, Russ. Fish. Ceram., pl. 169.

*Bagrus thallassinus*, Rüpp. N.W. Fische, p. 75, tab. 20, fig. 2.

„ *bilineatus*, Cuv. and Val. 14, p. 434.

„ *netuma*, Cuv. and Val. 14, p. 438, pl. 417.

? *Bagrus laevigatus*, Cuv. and Val. 14, p. 439.

*Arius nasutus*, Cuv. and Val. 15, p. 60; Bleek Verh. Bat. Gen. 21 Silur., p. 31.

*Bagrus rhodonotus*, Bleek. l.c., p. 29.

„ *carchariorhynchus*, Bleek l.c., p. 30.

*Netuma nasuta*, Bleek. Prodr. Silur., p. 95; and Atl. Ichth. Silur., tab. 61.

„ *thalassina*, Bleek Atl. Ichth. Silur., p. 28.

This fish was found almost everywhere in Torres Straits and New Guinea. Those caught off Katow were two feet long.

## FAMILY SCOPELIDÆ.

### 120.—SAURIDA TUMBIL.

*Rooner*, Valent., fig. 131; Renard 1, fig. 149.

*Lacertus peregrinus*, Rondel. de Pisc 15, cap. 9, p. 428.

*Badi mottah*, Russell, tab. 172.

*Salmo tumbil*, Bloch. 9, p. 112, tab. 430; Bl. Schn., p. 405.

*Saurus badimottah*, Cuv. Regne. Anim.; Rüppell, Neue Wirbelth. Fische, p. 77; Cant. Mal. Fish., p. 270.

*Saurida tombil*, Cuv. and Val. 22, p. 500; Bleek Verh. Batav. Gen. 24, Chir., p. 20.

One specimen; locality of capture unknown.

### 121.—SAURIDA GRANDISQUAMIS.

Gunth. Cat. Fish. Brit. Mus., vol. 5, p. 400.

Taken at Cape Grenville.

## FAMILY SCOMBRESOCIDAE.

### 122.—BELONE MELANOTUS.

*Belone melanotus*, Bleek. Natuurk. Tydschr. Nederl. Ind. 1, p. 94; or Verh. Gen. 24, Sneek. Cisseh., p. 14.

*Mastacembelus crocodilus*, Bleek. Nederl. Tydschr. Dierk. 3 (not syn.)

Taken at Cape York.

### 123.—BELONE ANNULATA.

Russell, pl. 175.

? *Belone medica*, Lessueur Journ. Acad. Nat. Sc. Philad. 2, 1821, p. 131.

*Belone annulata*, Cuv. and Val. 18, p. 447, pl. 550; Cant. Mal. Fish., p. 244; Day. Fish. Malab., p. 165.

„ *gigantea*, Schleg. Faun. Japon. Poiss., p. 245; Bleek. Act. Soc. Sc. Indo-Nederl. 3, Japan, p. 21.

? „ *melanurus*, Bleek. Verh. Batav. Gen. 22 Madur., p. 11.

? „ *cylindrica*, Bleek. Verh. Bat. Gen. 24 Snoek., p. 13.

? „ *brachyrhynchus*, Bleek. Nat. Tydschr. Ned. Ind. 6, p. 61 (young).

*Mastacembelus choram.*, Bleek. Nederl. Tydschr. Dierk. 3 (young).

Found at the Percy Islands and Cape York, over three feet long.

### 124.—HEMIRAMPHUS MARGINATUS.

*Esox marginatus*, Forsk. Descr. Anim., p. 67; Rüpp. N.W. Fische, p. 73.

? *Hemiramphus brevirostris*, Cuv. Regne. Anim.; Bleek. Verh. Batav. Gen. 24 Snoek., p. 17.

„ *lutkei*, Cuv. and Val. 19, p. 49.

„ *marginatus*, Bleek. Ned. Tydschr. Dierk. 3, p. 148.

Taken at the Palm Islands.

### 125.—HEMIRAMPHUS COMMERSONII.

Valent., fig. 318; Renard. 2, tab. 5, fig. 2.

*Acus* sp., Will. Hist. Pisc., tab. P., fig. 3.

*Far*, Forsk. Descr. Anim., p. 67.

*Esox espadon*, var. Lacep. 5, pl. 7, fig. 3.

*Hemiramphus Commersonii*, Cuv. Regne. Anim.; Cuv. and Val. 19, p. 28; Bleek. Verh. Batav. Gen. 24 Snoek., p. 17.

„ *far*, Rüpp. N.W. Fische, p. 74.

This fish was abundant about Cape York, and was found in greater or less number wherever the seine was hauled. It is a large and handsome species, but very inferior as an article of diet to the common Sydney gar fish.

### 126.—HEMIRAMPHUS QUOYI.

Cuv. and Val. 19, p. 26; Bleek. Nat. Tydschr. Nederl. Ind. 2, p. 491; Cop.* in Verh. Bat. Gen. 24 Snoek., p. 26; and Ned. Tydschr. Dierk. 3, p. 153.

This species was only found at Hall Sound, New Guinea.

### 127.—EXOCŒLUS NIGRIPINNIS.

Cuv. and Val. 19, p. 108; Cant. Mal. Fish., p. 250; Bleek. Act. Soc. Sc. Indo-Nederl. 2, Amboina 8, p. 86; and Ned. Tydschr. Dierk. 3, p. 120.

The only specimens taken of this flying fish are from the Warrior Reef, but it was seen almost everywhere.

## FAMILY CLUPEIDÆ.

### 128.—CLUPEA TEMBANG.

*Spratella fimbriata*, Bleek. Verh. Bat. Gen. 24 Haring, p. 27 (not Cuv. and Val.)

*Clupea gibbosa*, Bleek. Journ. Ind. Archip., 1849, Celebes.

*Spratella tembang*, Bleek. Verh. Bat. Gen. 24 Haring, p. 28; or Nat. Tydschr. Ned. Ind. 3, p. 774.

Three specimens of this pretty little herring were vomited by a booby at Bramble Cay. They are under six inches in length, and are probably immature.

### 129.—SPRATELLOIDES DELICATULUS.

*Clupea delicatula*, Benn. Proc. Comm. Zool. Soc. 1, p. 168.

„ *macassariensis*, Bleek. Journ. Ind. Archip., 1849, p. 72.

*Clupeoides macassariensis*, Bleek. Verh. Bat. Gen. 24 Haring, p. 17; or Nat. Tydschr. Ned. Ind. 3, p. 772.

This fish was seen in enormous shoals at Darnley Island during the fortnight which the Chevert lay there. At that time—the early part of August, 1875—the whole northern shore of the Island was literally black with them, and there would have been no difficulty, with proper appliances, in preserving hundreds of tons of these finest of all sardines.

## FAMILY CHIROCENTRIDÆ.

### 130.—CHIROCENTRUS DORAB.

*Clupea dorab*, Forsk. Dascr. An. p. 72, Lacep. 5, p. 425, Russell. 2, pl. 199.

„ *dentex*, Bl. Schn., p. 428.

*Esox chirocentrus*, Lacep. 5, p. 296.

*Chirocentrus dorab*, Cuv. Regne. Anim. Rüpp. N. W. Fische, p. 18. Richards. Ichth. Chin., p. 311. Cuv. and Val. 19, p. 150, pl. 565. Bleek. Verh. Bat. Gen. 22, Madura, p. 6. Cant. Mal. Fish., p. 277. Day. Fish. Malabar, p. 233.

„ *hypselosoma*, Bleek. Verh. Bat. Gen. 24, Chiroc, p. 25, or Nat. Tydschr. Ned. Ind. 3, p. 71.

One specimen, three feet long, was taken in the seine at Cape York.

## FAMILY MURÆNIDÆ.

### 131.—CONGER MARGINATUS.

? *Muræna tota cinerea*, Forsk. p. 22, No. 9.

? *Conger cinereus*, Rüpp. Atl. Fische, p. 115, pl. 24, fig. 1.

*Conger marginatus*, Valenc. in Voy. Bon. Poiss, p. 201, pl. 9, fig. 1.

„ *altipinnis*, Kaup. in Wiegm. Arch. 22, p. 72, or Apod, p. 114. Gunth. in Fish. Zang., p. 125.

„ *noordzicki*, Bleek. Act. Soc. Sc. Ind. Nederl. 2, Amboyna, 8, p. 86, or Atl. Ichth. Mur., p. 26, pl. 23, fig. 2.

One specimen from Low Island Reef.

### 132.—MURÆNA UNDULATA.

*Muraenophis undulata*, Lacep. 5, pp. 629-644.

*Muræna cancellata*, Richards. Voy. Ereb. and Terr. Fish., p. 87, pl. 46, figs. 1-5. Bleek. Verh. Bat. Gen. 25, Mur. p. 74, or Nat. Tydschr. Ned. Ind. 5, p. 531, and 8, p. 326.

„ *Valenciennii*, Eyd. and Soul. Voy. Bonite. Poiss, p. 207, pl. 8, fig. 1.

„ *Agassizi*, Bleek, Nat. Tydschr. Ned. Ind. 8, p. 458.

*Thyrsoidea cancellata*, Kaup. Apod, p. 76, fig. 59.

*Gymnothorax cancellatus*, Bleek. Atl. Ichth. Mur., p. 93, tab. 32, fig. 3; tab. 33, fig. 2; tab. 30, fig. 1. Kner. Novara. Fische., p. 384.

„ *Agassizi*, Bleek. l. c., p. 95, tab. 41, fig. 2.

*Muræna nubila*, Gunth. Fish. Zanz., p. 127.

Found on the reef, Low Island.

### 133.—MURÆNA NEBULOSA.

Seba. 2, tab. 69, figs. 1, 17.

*Muræna nebulosa*, Ahl. De Mur. et Opeiht., p. 5, tab. 1, fig. 2.

*Gymnothorax nebulosus*, Bl. Schn., p. 528.

„ *echidna*, Bl. Schn., p. 526.

*Echidna variegata*, Forst. desc. An. ed Licht., p. 181. Bleek. Atl. Ichth. Mur., p. 80, tab. 24, fig. 2.

*Muræna ophis*, Rüpp. Atl. Fische., p. 116, tab. 29, fig. 2. Rich. Voy. Ereb. and Terr. Fish., p. 93.

*Tharodontis ophis*, M'Clell. late Journ. Nat. Hist. 5, p. 217.

*Muræna variegata*, Richards. Voy. Ereb. and Terr. Fish., p. 94, pl. 47, figs. 11-16. Bleek. Nat. Tydschr. Ned. Ind. 3, p. 295, or Verh. Bat. Gen. 25, Mur., p. 47. Peters. Wiegm. Arch. 1855, p. 270.

*Paecilophis variegata*, Kaup. Apod., p. 98, tab. 13, fig. 67. Kner. Novara, Fisch. p. 381.

Found on all reefs.

### 134.—MURÆNA PSEUDOTHYRSOIDEA.

*Muræna pseudothyrsoidea*, Bleek. Nat. Tydschr. Ned. Ind. 3, p. 778, or Verh. Bat. Gen. 25, Mur., p. 44.

*Gymnothorax pseudothyrsoidea*, Bleek. Atl. Ichth. Mur., p. 104, pl. 46, fig. 2.

Found on the reefs at Darnley Island.

### 135.—MURÆNA FIMBRIATA.

*Muræna fimbriata*, Benn. Proc. Comm. Zool. Soc. 1, 1831, p. 168.

*Muræna bullata*, Richards. Voy. Ereb. and Terr. Fish., p. 86; Kaup. Apod., p. 81, fig. 60.

„ *isingleena*, Bleek. Nat. Tydschr. Ned. Ind. 9, p. 277 (not Richardson).

„ *isingleenoides*, Bleek. Verh. Bat. Gen. 25, Mur. p. 48.

*Gymnothorax isingleenoides*, Bleek. Atl. Ichth. Mur. p. 91, pl. 35, fig. 1, pl. 36, fig. 1. (Colouration of anal fin incorrect).

On reefs in Torres Straits.

### 136.—MURÆNA MELANOSPILA.

*Muræna melanospilos*, Bleek. Nat. Tydschr. Ned. Ind. 9, p. 279.

*Gymnothorax melanospilos*, Bleek. Atl. Ichth. Mur., p. 90, pl. 42, fig. 1.

Found at Darnley Island.

## ORDER V.

## LOPHOBRANCHII.

### FAMILY SYGNATHIDÆ.

### 137.—ICHTHYOCAMPUS MACULATUS.

*Plate* XVII., *fig.* 2.

D. 25. Osseus rings 20 x 57.

Very elongate. Operculum without ridge. Snout more than half the length of the head. A prominence on the occiput. Body rather deeper than broad, with the ridges well defined. Tail twice as long as the trunk, or nearly so. Dorsal fin standing on six rings, three of which belong to the body. Caudal fin very minute. Colouration in spirits brownish, with a yellow spot on each ring of the body below the lateral line.

One specimen was got at Darnley Island. Its length is eleven inches, and its depth at the deepest part scarcely over two lines.

### 138.—GASTROTOKEUS BIACULEATUS.

Valent. Amb. 3, p. 500, No. 481; Renard, fig. 73.

*Sygnathus biaculeatus*, Bl. Ausl. Fisch. 4, p. 10, tab. 121, figs. 1 and 2; Bl. Schn., pl 515, tab. 107; Cant. Mal. Fish, p. 387.

„ *tetragonus*, L Gm. 1, p. 1453; Lacep. 2, p. 42.

*Sygnathoides Blochii*, Bleek. Nat. Tydschr. Ned. Ind. 2, p. 259.

*Solegnathus Blochii*, Bleek. Verh. Bat. Gen. 25, Trosk., p. 24.

*Gasterotokeus biaculeatus*, Kaup. Soph. p. 19.

A number of this curious fish were taken in the seine in Hall Sound, New Guinea.

### 139.—HIPPOCAMPUS NOVÆ HOLLANDIÆ.

Steindachner, Sitzgber. Ak, Wiss. Wien, 1866, 53, p. 471, taf. 1, fig. 2.

One specimen. Place of capture not indicated.

## ORDER VI.

## PLECTOGNATHI.

### FAMILY SCLERODERMI.

### 140.—TRIACANTHUS BIACULEATUS.

*Balistes biaculeatus*, Bl., tab. 148, fig. 2.

*Triacanthus biaculeatus*, Cuv. Regn. Anim.; Cant. Mal. Fish., p. 360; ? Day Fish. Malabar, p. 260.

„ *oxycephalus*, Bleek. Verh. Bat. Gen. 24, Balist. p. 27, tab. 5, fig. 10; or Nat. Tydschr. Ned. Ind. 2, p. 496; or, Atl. Ichth. 5. p. 80. Balist. pl. 6, fig. 3.

„ *Blochii*, Bleek. Nat. Tydschr. Ned. Ind. 3, p. 81; or Atl. Ichth. 5, p. 89, Balist. pl. 3, fig. 1; Kner. Novara, Fische, p. 394.

„ *angustifrons*, Hollard, Ann. Sc. Nat., 1854, 1, p. 45, pl. 2, fig. 2.

„ *macrurus*, Bleek. Atl. Ichth. 5, p. 91, Balist. pl. 8, fig. 3.

Abundant about Cape York.

### 141.—MONACANTHUS CHEVERTI.

*Plate* XVII., *fig.* 3.

D. $1\frac{1}{2}$-24, A. 21.

Dorsal spine rough, but without barbs. Ventral spine present and moveable. Scales not very small. On each side, on, and in advance of the tail are two and a half series of black-rooted and recurved spines. Height of body, one-half of the length without the caudal fin. Distance from snout to eye, one-third of the total length. Dorsal spine taking its rise close behind the vertical from the pectoral, which is perpendicular to the hinder margin of the eye, and has fourteen rays. Dorsal and anal fins sub-elevated and equal. Caudal fin rounded, the tail being constricted above and below. Colouration yellowish, with an anal spot, a large patch above the median lateral line with two oblique bands extending to the dorsal fin, the dorsal spine, a band between the eyes extending on each side to the root of the pectorals, and four or five oblique parallel streaks of different thicknesses from the supra-median patch to the anal fin, black. There are also three narrow blue streaks from the eye to the base of the pectorals, and one surrounding the upper part of the mouth.

It is rather curious that this very peculiarly marked species of *Monacanthus* has an almost counterpart in the closely allied genus *Balistes*. *B. Aculeatus* has not only the markings very similar, but the number of rays in the dorsal and anal fins closely correspond. On the other hand, the present species, though undoubtedly a *Monacanthus* as far as generic characters are concerned, presents no resemblance to any other known species of the genus. Can it be that the characters on which the genera have been founded are not of such importance as Ichthyologists seem to imagine.

### 142.—OSTRACION CUBICUS.

*Ostracion prior*, Aldrov. 4, c. 19, p. 560; Johnston, p. 125, tab. 25; fig. 7; Willoughby Append., p. 20, tab. I. 10 and I. 12; Valent., p. 386, fig. 120; Seba., tab. 24, fig. 11.

*Ostracion* sp., Artedi Synon., p. 85 ; No. 8 and p. 84 ; No. 6 ; Genera, pp. 55-56, Nos. 1 and 4 ; Gronov. Mus. 1, p. 54, No. 119 ; Zoophyl., p. 44, No. 173.

*Ostracion tetragonus*, L. Mus. Ad. Fred., p. 59 ; Bleek. Atl. Ichth. Ostrac., p. 39, pl. 1, fig. 2, and pl. 3, fig. 2 ; Gunth. in Fish. Zanz., p. 129 ; Day Fish. Malab., p. 254.

,, *tuberculatus*, L. Syst. Nat. 1, p. 409.

,, *cubicus*, L. l.c., p. 410 ; Bloch. Ausl. Fisch. 1., p. 115, tab. 137 ; Lacep. 1, p. 461, pl. 22, fig. 1 ; Rüpp. Atl. Fisch., p. 3 ; Bleek. Verh. Bat. Gen. 24 ; Balist., p. 35, pl. 7, fig. 14 ; Lefebr. Voy. Poiss., p. 238, pl. 8 ; Hollard. Ann. Sc. Nat., 1857, 7, p. 162.

*Abu senduk*, Forsk. Descr. An., p. 17, No. 48.

*Ostracion deux-tubercules*, Lacep. 1, p. 459.

,, *bi-tuberculatus*, Bl. Schn., p. 501.

,, *cyanurus*, Rüpp. Atl. Fische, p. 4, taf. 1, fig. 2 ; Hollard Ann. Sc. Nat., 1157, 7, p. 167.

,, *Argus*, Rüpp. l.c., fig. 1.

? *Ostracion maculatus*, Quoy. and Gaim. Voy. Uran. Zool., p. 218.

*Ostracion immaculatus*, Schleg. Faun. Japon. Poiss., p. 296 ; Bleek. Nat. Ichth. Japan, p. 55 ; Brev. Nat. Jap. Fish., p. 284.

,, *tesserula*, Bleek. Nat. Tydschr. Ned. Ind. 3, p. 305.

Frequently taken in the net about Cape York.

### FAMILY GYMNODONTES.

### 143.—TETRODON VIRGATUS.

Rich. Voy. Ereb. and Terr. Fish., p. 62, pl. 39, figs. 8 and 9, and Voy. Herald Zool. p. 163, pl. 28, figs. 6 and 8. Bleek. Verh. Bat. Gen. 26, Blootk. p. 24, or Nat. Tydschr. Ned. Ind., 3, p. 299.

*Tetrodon manillensis*, Proce, Bull. Philom., 1822, p. 130.

*Holacanthus pilosus*, Gronov. Syst. ed. Gray, p. 28.

*Dibolomycter longicuadus*, Bibron. Guer. Rev. Zool., 1865, p. 279.

*Crayracion manillensis*, Bleek. Atl. Ichth. Gymnod., p. 60, pl. 4, fig. 2.

Gunther in his Catalogue makes this species a variety of *Tetrodon immaculatus*, Lacep., and gives a very long list of synonyms. It was found at almost every place visited by the Chevert.

### 144.—TETRODON SCELARATUS..

*Tetrodon sceleratus* (Forst.) Gm. L. 1, p. 1444. Bl. Schn. p. 506. Lacep. 1, pp. 476-508.

*Tetrodon argenteus*, Lacep. Ann. Mus. d'Hist. Nat. 4, 1804, p. 211, pl. 58, fig. 2. Schleg. Faun. Japon. Poiss. p. 275, pl. 121, fig. 2. Bleek. Nat. Tydschr. Ned. Ind. 3, p. 737, and Atl. Ichth. Gymnod., p. 64, pl. 5, fig. 1.

*Tetrodon argyropleura*, Benn. Proc. Comm. Zool. Soc. 2, 1832, p. 184.

*Tetrodon argentatus*, Blyth in Kelaart's Prodr. Faun. Zeyl. 1, Append. p. 49.

*Promecocephalus argentatus*, Bibron. Brev. Zool. 1855, p. 279.

*Tetraodon bicolor*, Brev. Nat. Japan Fish. p. 283.

Taken at Hall Sound and Cape York.

### 145.—TETRODON OBLONGUS.

*Tetraodon oblongus*, Bl. Ausl. Fisch. 2, p. 6, t. 146, fig. 1. Lacep. 1, pp. 476-502. Bl. Schn. p. 504. Cant. Mal. Fish. p. 380. Bleek. Verh. Bat. Gen. 24, Blootk. p. 12, and Atl. Ichth. Gymnod. p. 62, pl. 4, fig. 4.

*Physogaster oblongus*, Müller Abhaml. Ac. Wiss. Berlin, 1839, p. 252.

*Tetraodon alboplumbeus*, Rich. Voy. Sulph. Ichth. p. 121, pl. 58, figs. 6 and 7, and Ichth. Chin. p. 199. Bleek. l. c. p. 62, pl. 1, fig. 1.

*Tetraodon pœcilonotus*, Schleg. Faun. Japan. Poiss. p. 270, pl. 124, fig. 2.

*Tetraodon patoca*, Bleek. Verh. Bat. Gen. 24, Blootk. p. 11.

*Gastrophysus alboplumbeus*, Bleek. Nat. Tydschr. Ned. Ind. 7, p. 104.

*Tetraodon niveatus*, Brevoort, Jap. Fish. p. 284.

*Tetraodon Hartlaubii*, Bianconi. Mem. Acad. Bologn. 6, p. 146, pl. 2, fig. 1.

*Gastrophysus microphthalmus*, Blyth. Journal. As. Soc. Beng. 29, 1861, p. 174.

We are not quite certain as to the identity of this species; our specimens are small—not exceeding four inches in length—and the spots have more of an ocellated appearance than accords with the descriptions. They were taken at Hall Sound.

We have now—with the exception of a few species inadvertently omitted and a number exceedingly minute, and probably immature, which we have intentionally passed over—completed the Teleosteous fishes in the collection. The sharks and rays, of which there are a considerable number, will probably be made the subject of another paper, but we have no immediate intention of proceeding with the investigation of them.

## *EXPLANATION OF PLATES.*

### *Plate X.*

**Fig.**

1. *Caranx Cheverti, ⅔ nat. size.*
2. ,, *laticandis, ¼ nat. size.*
3. ,, *Papuensis, ½ nat. size.*

### *Plate XI.*

1. *Caranx bucculantus, ⅓ nat. size.*
2. ,, *edentulus, ⅕ nat. size.*
3. *Periophthalmus Australis, ⅓ nat. size.*

### *Plate XII.*

1. *Gobius Darnleyensis, nat. size.*
2. ,, *nigripinnis, nat. size.*
3. *Apocryptes lineatus, nat. size.*
4. *Gobiodon verticalis, nat. size.*

*Plate XIII.*

1. *Eleotris elongata, nat. size.*
2. *Salarias lineolata, nat. size.*
3. ,, *geminatus, nat. size.*
4. ,, *irroratus, nat. size.*

*Plate XIV.*

1. *Salarias filamentosus, nat. size.*
2. ,, *auridens, nat. size.*
3. ,, *cristiceps, nat. size.*

*Plate XV.*

1. *Mugil delicatus, ¼ nat. size.*
2. *Pomacentrus obscurus, nat. size.*
3. *Heptadecanthus longicaudis, nat. size.*

*Plate XVI.*

1. *Chaerops notatus, ⅓ nat. size.*
2. *Cheilolabrus magnilabris, ¼ nat. size.*
3. *Pseudoscarus flavolineatus, ⅓ nat. size.*

*Plate XVII.*

1. *Pseudoscarus nudirostris, ⅓ nat. size.*
2. *Ichthyocampus maculatus, ⅔ nat. size.*
3. *Moncanthus Cheverti, ½ nat. size.*

## Description of a supposed New Species of Rock Wallaby from the Palm Islands, on the North-east Coast of Australia, proposed to be called *Petrogale assimilis*. By E. P. Ramsay, F.L.S., Curator of the Australian Museum, Sydney.

It having been proposed by Mr. Wm. Macleay that I should examine the collection of mammals obtained during the Chevert expedition, with a view of reporting thereon and describing any new species it might contain, I beg leave to lay before the Society this evening a description of what I believe to be a new species of Rock Wallaby, of the genus *Petrogale*. As the specimen is at present unique, and the skull and teeth cannot easily be examined without risk of deterioration, I can make no remarks on those organs. I have only to add, then, that the specimen is a skin of a female, apparently adult, and, like most if not all of the skins obtained during the expedition, very beautifully prepared.

### PETROGALE ASSIMILIS, SP. NOV.

*Adult female.* Fur thick and close set, of medium length; general color of a dark ashy grey above, mingled with a few rusty hairs on the rump and hinder part of thighs, sides a little lighter, under surface lightest, inclining to white ashy grey; lips, chin and chest ashy white; tail of medium length, black, the hairs harsh, a little long at the tip, where they form an inconspicuous tuft; base of the tail rusty, paler on the sides and darkest above, the under part being ashy brown; hind feet brownish, becoming blackish on the toes where the hairs are a little longer, but do not conceal the nails, which are short; forelegs greyish, inclining to rusty in front, dark chocolate brown on the inner side, hands dark chocolate brown, hairs short, nails long, slender; head greyish brown, cheek mark faint, of an ashy tinge, also a faint light ashy mark over the eye in front; cheek stripe indistinct, extending from the lips to the base of the ears; hair on the margin and inside of the ears and the apex of a light cream colour, externally dark ashy brown. The hair radiating from behind the ears on the nape of the neck is directed forwards and downwards towards the cheek; between the ears it forms a ridge which extends forwards to opposite the eyes, the tips of the hairs here forming a black line. The basal portion of the fur of the back is of a dark blackish brown, with a chocolate tinge, the upper portion ashy, with the tips blackish; the hairs are a little longer on the sides, but few have the blackish tips; a small patch on the inner side of the forearm of a uniform dark chocolate brown. The ears are small and rather elongated; the hind limbs and tail rather short; the fore limbs long, slender—nails long, pointed, weak; the tarsi and hands clothed with short hair.

Total length, three feet; tail, 16 inches; hind limbs about 12 inches; the foot, 5·3; longest toe, 2·1, its nail, 0·3; fore limbs about 7·7 inches; longest finger, 1·1 in., its nail, 0·5; length of head, 4·2 in.; width across forehead, 2 inches; from snout to centre of orbit 2·1; to base of ear, 3·7; ears, length, 2 in. x 1.

This species is more closely allied to Petrogale penicillata (*Gray*) than to any other that I know of; but may be easily distinguished from that animal in being much smaller, in having a shorter tail, more slender fore limbs, shorter fur, and by the absence of the side stripe;* the ears also are smaller and comparatively narrow; the tail and feet are not clothed with the long harsh hairs so conspicuous in P. penicillata; nor is there any rufous on the under surface. I do not find, either, any indication of a curled patch of hair on the nape or shoulders of any specimens of Petrogale penicillata that I have examined; nor of the ridge of hair on the head.

The present species was obtained on the Palm Island, on the North-east coast, near Cleveland Bay, during the voyage of the Chevert, and was, I believe, the only specimen obtained; sex, female.

Mr. MASTERS exhibited nests of *Geobasileus reguloides,* and *chrysorrhous,* with specimens of the birds and eggs of each species. The nests were dome-shaped, with the openings on one side, and each with an additional open nest on the top. Mr. Masters stated that Mr. Gould had noticed this peculiarity in one of the species (*chryssorhous*), but without having any suspicion of the use for which it was intended. He said that he was now in a position to explain the use of this double nest. During this spring, a brood had been actually brought out from one of the nests exhibited (that of *G. reguloides*), at Mr. Shepherd's nursery, at Chatsworth, Rope Creek. The nest was in an orange tree, close to a shed where the men were constantly at work, and it was generally observed that during the process of incubation the male frequently occupied the upper nest during the day, keeping up a constant warbling, and roosted there regularly at night. It appears now that both species have similar habits.

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* A specimen in the Australian Museum, which *may* be referable to this species, has a short white patch running from behind the shoulder toward the abdomen.

Mr. MASTERS also exhibited a nest of *Gerygone albogularis*, containing two eggs of its own, and one of a bronze cuckoo (*Lamprococcyx plagosus*). He also exhibited a stuffed specimen of the cuckoo, to show how apparently impossible it is for a bird of that size to introduce its egg into a nest with such a small opening. He stated that the general opinion, though it was in no way proved, was that the bird used its beak for the purpose.

## MONDAY, 27TH DECEMBER, 1876.

WILLIAM MACLEAY, F.L.S., President, in the chair.

The Hon. Secretary exhibited some specimens of Fossil Bones of a species of *Halmaturus*, from Darling Downs, procured by F. H. Cockburn Hood, Esq., F.G.S.

The following papers were read :—

## Continuation of the Mollusca of the Chevert Expedition.

By J. BRAZIER, C.M.Z.S., Cor. Mem. Roy. Soc. Tas.

### FAMILY LITTORINIDÆ.

### 1.—LITTORINA PICTA.

*Littorina picta*, Phillippi, Proc. Zool. Soc. London, 1845, p. 139.

„ „ Reeve, Conch. Icon., pl. 15, Littorina, fig. 81.

*Hab.* Mud Bay, Cape York ; found during very low water, on the rocks.

### 2.—LITTORINA INTERMEDIA.

*Littorina intermedia*, Philippi, Proc. Zool. Soc. London, 1845, p. 141.

„ „ Reeve, Conch. Icon., pl. 15, sp. 101.

*Hab.* Mud Bay, Cape York, North Australia ; found with *Littorina picta*.

### 3.—LITTORINA UNDULATA.

*Littorina undulata*, Gray, Zool. Beechey's Voyage, p. 140.
„ „ Reeve, Conch. Icon., pl. 13, sp. 67, a, b, d.

*Hab.* Darnley Island, Torres Straits ; found on the reefs.

### 4.—LITTORINA NEBULOSA.

*Phasinella nebulosa*, Lam. Anim. Sans. Vert., tome 7, p. 54.
*Littorina nebulosa*, Reeve, Conch. Icon., pl. 11, sp. 55, a, b.

*Hab.* Darnley Island, Torres Straits, Brazier. Honduras, Reeve.

### 6.—LITTORINA MELANACME.

*Littorina melanacme*, E. Smith, British Museum.

*Hab.* Barrow Island, North-east of Australia.

This species was described by Mr. Edgar Smith, of the British Museum, from specimens collected by me at Makeira Harbour, San Christoval Island, Solomon's Archipelago; found also at Fitzroy Island, North-east Australia, when in the Eclipse Expedition of 1871.

### 7.—LITTORINA SCABRA.

*Helix scabra*, Linn.
*Littorina scabra*, Reeve, Conch. Icon., pl. 5, sp. 21a.

*Hab.* Mud Bay, Cape York, North-east Australia; Garden Island and Rushcutter Bay, Port Jackson. Found on Mangrove trees.

### 8.—LITTORINA (TECTARIUS) MALACCANA.

*Littorina Malaccana*, Philippi, Abbild. und Besch. Conch., vol. 3, p. 15, pl. 6, fig. 17.

*Hab.* Darnley Island, Torres Straits; two specimens were found in the crevice of a block of coral. Fitzroy Island, North-east Australia. At the north end of the above island I found this species very common in 1871, in regular clusters on the granite boulders.

### Family Planaxidæ.

#### 9.—Planaxis sulcata.

*Planaxis sulcata*, Lam. Anim. Sans. Vert., tome 7, p. 51.
,, *sulcatus*, Chenu. Manuel de Conch., part 1, p. 303, fig. 2143.

*Hab.* Dungeness and Darnley Islands, Torres Straits.

#### 10.—Planaxis zonata.

*Planaxis zonata*, A. Adams, Proc. Zool. Soc. London, 1851, p. 271.

*Hab.* Nepean Island, Torres Straits; found on the reef under coral.

#### 11.—Quoyi decollata.

*Planaxis decollatus*, Quoy and Gaimard, Voy. d l'Astrolabe, vol. 2, pl. 33, fig. 33-34.

*Quoyi decollata*, Chenu. Manuel de Conch., part 1, p. 304, fig. 2147.

*Hab.* Darnley and Long Islands, Torres Straits.

### Family Rissoidæ.

#### 12.—Rissoina clatharata.

*Rissoina clatharata*, A. Adams, Proc. Zool. Soc. London, 1851, p. 265.

*Hab.* Darnley Island, Torres Straits; 15-20 fathoms, sandy bottom. Oualan, or Strong's Island; found on the reefs under coral.

#### 13.—Rissoina nodicincta.

*Rissoina nodicincta*, A. Adams, Proc. Zool. Soc. London, 1851, p. 266.

*Hab.* Albany Passage, Cape York, North Australia, 11 fathoms, sandy mud bottom. Darnley Island, Torres Straits, 25-30 fathoms, white sand bottom. Katow, New Guinea, 8 fathoms, sandy mud bottom.

### 14.—RISSOINA SCALARIANA.

*Rissoina scalariana*, A. Adams, Proc. Zool. Soc. London, p. 265.

*Hab.* Darnley Island, Torres Straits, 30 fathoms, sand bottom.

### 15.—RISSOINA GIGANTEA.

*Rissoina gigantea*, Deshayes.

„ *Cumingii*, Reeve, H. and A. Ad. Recent Moll., vol. 3, pl. 35, fig. 1.

„ *gigantea*, Cross, Journal de Conch., 1861, vol. 9, 3rd series, p. 309.

*Hab.* Hall Sound, New Guinea. One fine specimen found on the reef under a stone.

### 16.—RISSOINA MONTROUZIERI.

*Rissoina Montrouzieri*, Souverbie, Journal de Conch., 1862, vol. 10, 3rd series, p. 237, pl. 9, fig. 5.

*Hab.* Darnley Island, Torres Straits; found under stones. Bet Island; found on sand beaches after gale. Noumea, New Caledonia (Brazier).

### 17.—RISSOINA EXASPERATA.

*Rissoina exasperata*, Souverbie, Journal de Conch., 1866, vol. 14, p. 259, pl. 9, fig. 10.

*Hab.* Palm Island, North-East Australia; found on the reefs under coral and stones. Darnley Island, Torres Straits; under stones, and at 25 fathoms, sandy mud bottom.

### 18.—RISSOINA. SP. ?

*Hab.* Katow, New Guinea, 8 fathoms, mud bottom. One specimen found dead and sea worn.

### 19.—RISSOINA. SP. ?

*Hab.* Katow, New Guinea, 8 fathoms, mud bottom. One specimen found dead and sea worn.

### 20.—RISSOINA. SP. ?

*Hab.* Katow, New Guinea, 8 fathoms, mud bottom. Cape York, Mud Bay, North Australia, 4 fathoms, mud bottom. Off York Island, Torres Straits, 13 fathoms, hard yellow mud bottom. Specimens all dead and sea worn.

### 21.—RISSOINA. SP. ?

*Hab.* Darnley Island, Torres Straits, 25 fathoms, sandy mud. One specimen found dead and sea worn.

### 22.—RISSOINA. SP. ?

*Hab.* Warrior Island, Torres Straits. Two specimens found in shell sand, dead and worn.

### 23.—RISSOINA. SP. ?

*Hab.* Darnley Island, Torres Straits, 25 fathoms, sandy mud. Specimens dead and sea worn.

### 24.—RISSOINA. SP. ?

*Hab.* Darnley Island, Torres Straits, 25 fathoms, sandy mud bottom. One specimen found dead and sea worn.

### 25.—RISSOINA. SP. ?

*Hab.* Darnley Island, Torres Straits, 25 fathoms, sandy mud bottom. One specimen found dead and sea worn.

### 26.—RISSOINA EFFICATA. N. SP.

Shell elongate, solid, white, smooth; whorls 7, flattened, the three upper having two spiral granulated ridges on the centre of the whorls; suture deep, aperture semiovate; inner lip moderately callous, outer lip very much thickened, white, slightly sinuated anteriorly.

Length, 4 lines; breadth, 1½ line.

*Hab.* Barnard Islands, No. 3, North-east Australia; found under blocks of coral.

### 27.—RISSOINA TERES. N. SP.

Shell narrowly elongate, somewhat solid, white; whorls 7, flattened, finely cancellated, the last obtusely keeled below the centre; suture fine, spire acuminate, apex acute, aperture semi-ovate, white, slightly callous; outer lip dilated and thickened, slightly channelled above, moderately sinuated anteriorly.

Length, 3½ lines; breadth, 1¼ line.

*Hab.* Mud Bay, Cape York, North Australia, 4 fathoms. Bet Island, Torres Straits, 11 fathoms, sandy mud. West side of Warrior Reef, 8 fathoms, hard mud bottom. Off Katow, New Guinea, 8 fathoms, sandy mud bottom. Specimens not in very good condition.

### 28.—RISSOINA PULCHELLA.

Shell elongate, solid, whitish, longitudinally finely ribbed, ribs smooth; interstices transversely minutely lirate, only seen with the lens; whorls 8, slightly convex; spire acuminate, apex acute, aperture subovate; inner lip with thickened callus, outer lip thickened internally, ivory white, expanded and deeply sinuated anteriorly.

Length, 3¼ lines; breadth, 1¼ line.

*Hab.* Barnard Islands, No. 3, North-east Australia; Home Islands, off Cape Grenville. Found on the reefs under coral.

### 29.—RISSOINA INERMIS. N. SP.

Shell elongate, thin, shiny, white, minutely cancellated; whorls 7½, flat, the last roundly convex; suture distinct, spire acuminate, apex acute, white, smooth; aperture ovate; inner lip thickened with thin plate of callus, outer lip thickened and expanded, reflected, little sinuated anteriorly.

Length, 3 lines; breadth, 1¼ line.

*Hab.* Darnley Island, Torres Straits, 30 fathoms, sandy bottom.

### 30.—RISSOINA CARDINALIS. N. SP.

Shell somewhat pyramidally ovate, thick, whitish, strongly longitudinally ribbed; whorls 8 to 9, slightly rounded, suture distinct, last whorl with a rounded ridge at the base; aperture subovate; inner lip thickened, outer lip thin at edge, thickly variced behind, sinuated anteriorly.

Length, 3 lines; breadth, 1 line.

*Hab.* Cape Grenville, North-east Australia, 20 fathoms, sandy mud. Cape York, North Australia, 11 fathoms, sandy mud bottom. Off Katow, New Guinea, 8 fathoms, sandy mud bottom.

### 31.—RISSOINA INCONSPICUA.

Shell small, elongately ovate, white, obliquely somewhat longitudinally ribbed; ribs sharp, interstices smooth, rounded; whorls 6, flat, spire short, apex papillose, shining white; aperture subovate; inner lip thickened and slightly expanded over the body whorl, the outer lip thickened and rounded, minutely sinuated anteriorly.

Length, 1; breadth, ½ line.

*Hab.* Dungeness Island, Torres Straits, 11 fathoms, mud bottom; brought up on the fluke of the ship's anchor. Sue Island, Torres Straits, 13 fathoms, sandy mud bottom.

### 32.—ALVANIA. SP. ?

*Hab.* Warrior Island, Torres Straits.

Three very bad and worn specimens, ¾ of a line long, were found in shell sand in the middle of the island. What little sculpture remains reminds me of *Alvania Beani,* Hanley, found on the English Coast.

### 33.—ALVANIA. SP. ?

*Hab.* Darnley Island, Torres Straits, 30 fathoms.

A single sea worn specimen, ¾ of a line long. The little sculpture that remains resembles in form *Alvania Zetlandica,* Mont., found in the north of Scotland.

## Notes of a Collection of Birds from New Britain, New Ireland, and the Duke of York Islands, with some remarks on the Zoology of the Group By E. Pierson Ramsay, F.L.S., Curator of the Australian Museum, Sydney.

Australian ornithologists may be pleased to know that a fine collection of Birds obtained at the Duke of York Island, New Ireland, and New Britain, has been secured for the Australian Museum. This fine collection consists of 257 specimens and 90 species, nearly all of them from the abovenamed localities. They were collected by the Rev. George Brown and Mr. James Cockerell, from whom they were purchased.

This collection is remarkable not only for containing a large number of species, but particularly in bringing to light again a number of interesting forms of which little or nothing has been seen or heard since the voyage of the Coquille in 1820-5. Among these I may mention the beautiful golden and black flycatcher *Arses* (*monarcha*), *chrysomela*, *Cynnyris aspazia*, *Centropus ater-albus*, *Dicæum erythrothorax*, (Less.), (*D. schistaceiceps*, Gray), and the true *Campephaga karu* (Less.): from this last it is very evident that our Australian bird known under that name is specifically distinct, and may *perhaps* be, as stated in Gray's Hand-list, *C. rufiventris*. Others again, such as *Dendrochelidon mystaceus*, *Arses telescopthalmus*, *Monarcha inornata*, *Piezorhynchus chalybeocephalus*, are also represented. The Accipitres are by no means numerous. One species of *Milvus*, perhaps *M. affinis* of a dark race, *Astur hiogaster* (?)* adults and young having no bars on wings or tail, from New Britain and New Ireland. *Haliaetus lencogaster*, *Haliastur indus*, *var. leucocephalus*, and *Baza reinwardti* were obtained from the same localities. Also two specimens of *Ninox* from New Ireland (?), one *N. variegata*, and the other of a new species closely allied to *N. tæniata* and *N. hypogramma*, and not unlike *Athene brama*. One of the most interesting birds is the minute true esculent-nested swallow, *Collocalia esculenta*, *L.* There are many specimens of the fine Roller, *Eurystomus crassirostris* (Sclater.), and two specimens of small kingfishers, *Alcedo moluccensis* and the beautiful *Ceyx solitarius.* Also a fine *Tanysiptera*, which I believe to be new ; it is closely allied to *T. sylvia*, but has the head and neck black, the back white, and the under surface of a dull rufous or buff tint. *Halcyon albicilla* is well represented. This species seems to have an extensive range. I have received it also from New Georgia and St. Christoval Islands ; also *Halcyon chloris*, all from the Duke of York Island. Three species of *Campephaga* and a crow, most probably *Corvus orru*, which is said to be plentiful in New Britain. *Gracula Krefftii* (Sclater), evidently common ; in this species the *upper and under tail coverts are of pure white*, not tinged with yellow as represented in the plate given in P. Z. S., 1869, pl. 9. A very handsome lyre-tailed Dicrurus, perhaps *D. lyra* or *D. longicauda* : another species answering the description of Gray's *D. assimilis*, is probably *D. carbonarius*, or one of the numerous varieties of *D. bracteatus*.

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* Perhaps a new species, as it does not altogether agree with *A. hiogaster.*

Two species of *Graucalus*, *G. hypoleucos*, and another, *G. melanops*. The latter differs a little from our N.S.W. individuals of that species.

Among the Flycatchers, *Arses chrysomela* is the most beautiful, and evidently a rare bird, although found also on the south-east part of New Guinea, *Arses telescopthalmus*, *Rhipidura isura*, of which doubtless *R. setosa*, *R. assimilis*, are only local varieties; *Monarcha loricata*, and another very beautiful allied species, having the head surrounded by a white line, extending round the occiput from the earcoverts, but in other respects similar to M. loricata; *Rhipidura* (Sauloprocta) *tricolor*, and *Przorhynchus chalybeocephalus* are not rare.

Among the Robins I was much surprised to find *Petrœca pusilla stated to be* from Duke of York Island. I can find no difference between these birds and specimens from the Solomons and Fiji Islands. I think there must be some mistake in the locality given by Mr. Cockerell.

Among the Honey-eaters I find a *Philemon plumigenys*, probably, as the cheeks are clothed, it is otherwise like *P. vulturinus* and *P. inornatus*.

A beautiful little *Myzomela*, of a uniform light carmine tint, and the smallest I have seen of the genus.

Of the Dicæidæ, *Dicæum erythrothorax* (Less.) is the only one obtained. The pectoral spot is of a crimson hue, not yellow or orange, as figured in the "Voyage of the Coquille." It appears otherwise identical.

The beautiful Sun-birds—*Cinnyris Australis* (*C. frenata*?) and *C. aspaziæ*—appear to be very plentiful, as numerous examples were obtained. Some I find labelled from the Duke of York Island; others from New Ireland; so I presume they are found on both islands. Both species are found on the South-east coast of New Guinea, and I once remember seeing a specimen said to have been obtained at Cape York; but a little cross-questioning soon convinced me that the dealer who had it for sale could supply one from any part of the world, if I required it.

Of the *Artamidæ* there is only one species in the collection—a very fine and beautiful bird, allied to *Artamus monachus* (Bp.), with the whole of the plumage white, except the head and neck, and the wings and tail quills, which are dusky, almost black; under surface of wing quills, dusky; in size it is slightly larger than *A. mentalis*. One pair of *Pitta Macklottii*? was also obtained on New Ireland.

*Excalfatoria sinensis* was found, but no other species of quail was contained in the collection. The New Ireland bird differs in having only a small patch of rufous on the vent, and no streaks of white on the head feathers. The pigeons are especially fine and beautiful; but at the same time, without works of reference, it is a very difficult matter to determine them correctly. Some of them I have been unable to recognise: they may prove varieties of allied forms, or most likely new species. One bird I have never been able to find a description of, but which I have known for the last six years, having had a spirit specimen of it, collected in 1869-70 by Captain Ferguson. This is a pigeon allied to *Carpophaga*, but having the skull greatly enlarged under the cere, forming a high anteriorly-rounded protuberance at the base of the bill. The bird is in size and colouration almost the same as

*Ptiltonopus iozonus*, of the same deep green, and having the same *bright deep orange* spot on the upper part of the abdomen; the shoulders and under surface of the wings, rich bluish ash-colour; upper coverts and scapulars also tinged mesially with the same colour; abdomen green, towards the centre white, margined with light yellow; tail green above, apical third and the whole of the under surface ash colour; the throat ashy, margined with green; all the remainder of the body deep green; wing coverts and secondaries narrowly margined with yellow. Total length 8·5 inches, wing 5, tail 2·8, tarsus 0·9; bill from gape, 0·9; knob at the base of the cere deep reddish orange, length 0·5 × 0·6, height above bill 0·5 inch; middle toe 1·1, its nail 0·3. The back, in certain lights, and the secondars, have a bronze tint; the primaries also tinged with bronze on the outer webs. Numbers of this beautiful bird, for which the generic name of *Kranocera*[*] may be employed, on account of its helmet-shaped cere, were obtained on the Duke of York Island. This bird, in *the pointed form of the first primary* (and general structure, except in the helmet at the base of the cere), comes nearer to members of the genus *Ptilonopus* in the section to which belongs *P. coronulatus*, &c., of the subgenus *Cyanotreron* (Verr.). In the plumage it imitates *P. iozonus* (G.R. Gr.). I can find no description of this bird in any works at my disposal; nor can I find any *genus* in Gray's Hand-list under which I can place it. Notwithstanding this, the bird must surely have been named and described somewhere. Specimens have been in the Dobroyde Collection for at least six years.

Of the genus Carpophaga at least four specimens were obtained. *C. pacifica*, *C. microcera* (?), *C. rubricera*, and *C. luctuosa*, that is if our Australian species, as figured by Mr. Gould (Bds. Aust. V., pl. 60), is to be left as *C. spilorrhoa*. (G. R. Gn.)

Mr. Gray remarks, however, † that *C. spilorrhoa* "is distinguished by the feathers of the thighs and under tail coverts being spotted near the margins, and the outer tail feather with the greater part of the outer web and tip black; while in

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[*] Helmet-cered. † P. Z. S., 1858, p. 186.

*C. luctuosa* the feathers of the thighs and the under tail coverts end in deep black, and the outer tail feather is white throughout, except in the outer web nearest the base." Well, this may or may not be the case; I am inclined to think it is altogether incorrect, for on examining the white Carpophaga from New Ireland I find that the flanks and under tail coverts *end in black*, and the outer tail feather is *black at the tip, broadly on the inner web*, and *extending in a narrow line along the margin of the outer web for two-fifths* (*⅖ths*) *of its length from the tip ;* while in the Queensland specimens (*C. luctuosa*, of Gould's Bds. of Australia), the flanks and under tail coverts are *spotted with black near the tip* (sometimes a distinct spot on either web, but more generally these spots are confluent), and the outer tail feather on either side is altogether white, except a stripe of black on the outer web about the centre of the feather; this black stripe is broad enough to reach the shaft in some specimens, and *this feather* in others is also margined *more or less with black at the tip.* These differences and peculiarities are constant respectively in all the examples I have examined. Moreover, in the New Ireland and Duke of York Island birds (which I take to be *the true C. luctuosa*), the whole of the plumage is, *even in dried skins*, suffused with rich cream colour on the down next the body, some of the shafts of the tail feathers, which are twelve in number, being of a rich yellowish tint, and the wings are *deep clear black.* Now, in the Australian specimens, and those from Port Moresby, in New Guinea, the wings are *mealy black*, as if the black had been powdered over with a white dust or powder, such as is found on the large white cockatoos (*C. galerita)*, and the tint of the down and concealed parts of the feathers is of a rosy salmon tinge, and only noticeable in freshly-killed specimens; in the dried skins there is no trace of it after a few months; *tail feathers*, fourteen.

Dr. G. R. Grey remarks * that "*Carpophaga (Myristicivora) melanura* (?) differs from *Carpophaga luctuosa* as described and figured by Temmink, pl. col. 247, in having the tail of a more uniform black colour, with the inner webs of each feather only white; this latter colour decreases in depth to the middle feathers, and the quills are of a uniform black. It is much smaller in size, but is otherwise like *C. luctuosa*."

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* P. Z. S., 1860, p. 361.

The collection contained specimens of two, if not three, species of *Macropygia*—one which I take to be *M. cateretia*, and another not unlike our Australian *M. phasianella*—which I think will turn out quite new to science. All from the Duke of York Island and New Ireland.

*Chalcophaps stephani* was obtained in tolerable numbers. I see no difference between these specimens and others from Port Moresby, New Guinea. *Phlegœnas stairii* was found, but rather rarely; also a most lovely species *identical*, or very close to *Chalcophaps margarithœ* of Salvadori and D'Albertis. I believe only three of this beautiful species were obtained. The feathers on the sides of the chest have the margins cut in a curiously curved line.

*Geophilus nicobarica*, appears to be common. One specimen of a beautiful species of ground Pigeon, apparently allied to *Macropygia* is one of the most birds in the collection. The head and upper part of the neck and throat are of an ashy white; the whole of the body of a dull slate color; the ends of the feathers broadly margined with most beautiful, resplendent metallic reflections of purple, green, and rosy lilac. I can find no description of the bird in any works at my disposal, but it is not unlike *Janthœnas metalica* (Temm.). It comes from the Duke of York Island.

Of Ptilinopi there are two species, *P. superbus* not differing in any way from our Australian individuals, and a beautiful species identical with or allied to *P. rivoli*, with a white band across the chest.

Amongst the Psittaci I find two species of white Cockatoos, *C. opthalmica* and *C. ducorpsi*, and some fine specimens of the beautiful little *Nasiturna pusio* (Sclater), of which genus I have lately examined a smaller variety, if not a distinct species, from Port Moresby.

The specimens of a species of *Eclectus* are smaller than those of *E. polychlorus*, but the same in color; these may perhaps be referable to E. Linnæi (Wagl.). A fine set of both the males and females and young of both sexes are contained among those purchased for the Museum, from New Britain; and a beautiful little *Trichoglossus*, near *T. placens*, but probably *new;* also a diminutive species of *Loriculus* (?) of a uniform bright green, having a spot of yellowish red on the chest; the upper tail coverts yellowish green, and the under surface of the wings bluish green.

Among the Cuckoos, *Curulus inspiratus ? Endynamys tahaiticus* were plentiful.

*Centropus ater-albus*, and *C. violascens* were obtained. *Buceros ruficollis* did not appear to be rare, as many were obtained.

Of the Rallidæ, *Rallus Philippensis*, a very widely distributed species, was found, and a *Megapodius*, species probably new, but resembling the species from the Island of Savo, in the Solomon group. We were fortunate in securing both adults, half-grown birds, and the chick of this species for the Museum.

The Herons were not as numerous as might be expected. *Nycticorax*, represented by a species closely allied to, if not identical with *C. Caledonicus*. *Demiegretta Brayi* in various stages of plumage.

Of *Buturoides Javanicus* (*B. flavicollis ?*) I believe only one specimen was obtained.

*Tringa minuta*, *Actitis empusa*, and *Totanus brevipes*, from the Duke of York Island. *Limnocinclus acuminatus*, from New Ireland. *Ægialitis bicincta*, *Æ. inornata*, without localities. Among the sea birds, *Anous stolidus*, *Fregetta aquila*, *L.? ; Phæton rubricanda*, *Nectris carneipes* (Gould), were obtained off the Solomon Islands.

This closes my remarks on one of the largest and most interesting collections that have ever been made in those localities; and although it contains several species which I consider *new*, I have refrained from naming them in deference to the wishes of my esteemed friend, the Rev. George Brown, who has informed me he was desirous of sending a set of all the species he had obtained to our mutual friend Dr. Sclater, the learned Secretary of the Zoological Society of London, who will doubtless give them the attention they deserve, and we hope soon to see a full account of the collection, with descriptions of the new species, from the pen of that eminent ornithologist.

In addition to the large collection of Birds, Mr. Brown and Mr. Cockerell obtained a varied and interesting collection of mammals, a large number of specimens of *Cuscus*, *C. orientalis*, *Belideus ariel*, *Halmaturus* (?) nov. sp., (allied to *H. brunii*, and which I have named, in l ' the Rev. George Brown, *H. Brownii*), and a Peramele ng from *P. papuensis*, chiefly in the remarkably stiff, spine-li ur on the back, and which I have named after Mr. Cockere *ckerelli*, both of which will be found described in the present nu r of the proceedings of the Linnæan Society of N. S. W.

Among the fruit-eating bats I find two large species of Pteropus resembling our "Flying Foxes;" a smaller species, which is doubtless *Pteropus personatus*; and a very interesting species of a genus allied to Pteropus and strongly smelling of musk, which may perhaps prove to be *Cephalotes peronii.* Besides two (?) species of *Harpyia* (*H. cephalotes* and another), there are six or eight other species of bats belonging to various genera, of which more will be said hereafter.

Of Rodents there are but two species of rats, one of a dull mouse-colour, with spiny flat hairs down the back—perhaps a species of *Echimys*; and the other a species of Mus, known to the missionaries as the "banana rat," a close-furred rufous-coloured species, descriptions of which I hope to lay before this society at its next meeting.

The collection of Reptiles consists of about 170 specimens—37 species—chiefly pythons and harmless tree-snakes, two species of Geckos, and others of the genera *Grammatophora*, *Odatria Monitor*, *Hinulia*, and *Mocoa*, &c. Of Batrachians, there were only two or three specimens, one of the genus *Pelodryas.*

The collection of Arachnidæ was not large in species, although considerable in numbers and size. It chiefly consisted of a large species of *Nephila* (Leach), and a few *Casteracantha.*

On the Fishes, among which are some beautiful and very interesting forms, I hope shortly to offer some remarks, having secured most, if not all, of the specimens obtained.

Much credit is due to the Rev. Mr. Brown and Mr. Cockerell for the aid they have given to science, and the great patience and energy displayed in getting together such large and beautiful collections of the natural history of these little known islands. Having examined the whole of the collections so obtained, of the birds and mammals, I estimate the number to be about 1500 specimens. The invertebrata I did not examine closely, but saw sufficient of them to know that the Coleoptera alone must have numbered several thousand: it contained some large species of *Curculionidæ* and Longicorns of many species. The Lepidoptera consisted of several beautiful species of *Papilio*, *Ornithoptera* of at least two species, and several belonging to the family *Nymphalidæ;* a good number of the *Pieridæ* and *Daniidæ.* In all about 800 specimens or more.

Of Mollusca there was a large number. I did not observe anything striking among them, but some of the smaller species of land and fresh water shells will probably prove new. I may notice, however, the following from New Ireland and Duke of York Island :—*Helix Macgregori* (Cox) in great numbers, *Helix Lombei*, *Helix Nova-Hibernicæ*, and two other species, *Partula spadacea*, *Leptopoma vitrea ; Melanopus sp. ; Pythia*, two species ; *Melania*, six species ; and a great quantity of *Cyclostoma læveus*, evidently a most common shell throughout the group ; besides a new species of *Omphalotropis.*

Among the Geological specimens from New Ireland were pebbles of Jasper, Porphyry, and Porphyry conglomerate, specimens of Coral and Calcareous-limestone, some nice crystals of Aragonite, and lumps of Yellow Clay, *Silicate of Alumina.* The most interesting geological specimen obtained from New Ireland consists of a mass of pure chalk, containing *Globigerinæ* ; this must be found in large lumps, for Mr. Brown has presented the Museum with some rude figures cut out of solid blocks about four feet in length, eight inches in diameter, and fifteen inches wide. These images, although not altogether deified, are held in considerable reverence, and kept in a large house set aside for their reception, and into which no female is allowed to enter. They are rude representations of saints with palm leaves held in their hands, the fronds curving over their heads; others have what I take to represent rays of glory; some with Elizabethan collars and tall conical hats; others again, with a sort of helmet or cock's comb-like ridge over the crown, and holding palm leaves, as if for a canopy, over them.

I scarcely know which is the more interesting, this deposit of Globigerina chalk, with its masses of minute shells, or the fact of these carvings representing the Elizabethan and old Spanish mode of dress, which points to the probability of the early Spanish voyagers having visited these Islands.

Mr. Brown informs me that the chalk is thrown up by the sea after earthquakes and tidal waves, in large masses, which fact seems to point to quite another origin of these Islands than is generally supposed.

I have forwarded some portions of this Globigerina chalk to Professor Liversidge, who will doubtless give us a full account of its analysis in due time.

## On *Perameles Cockerellii*. By E. P. Ramsay, F.L.S.

Not having an opportunity of examining the teeth of this species when describing the animal, I take the first opportunity of supplying this omission, as far as possible, with a remark on the coloration :—

*Incisors* $\frac{4}{3}\cdot\frac{4}{3}$, I can find no trace of the 5th *(large posterior)* incisor ; *canines* $\frac{1}{1}\cdot\frac{1}{1}$, these are, comparatively speaking, *very* small, and about equal in length to the first premolar; *premolars* $\frac{3}{3}\cdot\frac{3}{3}$; molars $\frac{4}{4}\cdot\frac{4}{4}$, all developed, comparatively broad. The distance between the posterior incisor to the canine is 0·2; to the first true molar, 0·7.

In *Perameles Cockerelli* there is a well-defined narrow line along the upper lip from opposite the canine tooth, bordering the blackish brown of the upper part of the face and head, which extends a little below the eye, and from thence in an upward curved line to the ears; the sides of the face below are ashy grey, pencilled below the ears with blackish and a few little rusty red; there is also a small patch of rusty red at the base of the ear below; the hind feet are blackish brown; and the snout rather bare in front from opposite the canine tooth.

## Notes of a Collection of Birds from the Norman River, Gulf of Carpentaria, with descriptions of some new species. By Le Comte de Castelnau, Consul Général de France, Melbourne; and E. Pierson Ramsay, F.L.S., Curator of the Australian Museum, Sydney.

Le Comte de Castelnau having lately secured for his museum a collection of Birds from the Gulf of Carpentaria, we thought, perhaps, some remarks upon the avi-fauna of this far-off and little known region would prove acceptable to the Society. The following, then, is a list of the species obtained, with descriptions of such as we deem to be *new* or undescribed :—

*The Nomenclature, except where otherwise stated, is that used in Mr. Gould's Handbook to his Birds of Australia.*

1. HALIAETUS LEUCOGASTER, *Vigors.*
2. HIERACIDEA ORIENTALIS, *Schleg.*, *Sharpe, Brit. Mus. Cat., Acc., vol* 1., *p.* 422, 1874.
3. PANDION LEUCOCEPHALUS, *Gould.*
4. HIERACOGLAUX CONNIVENS.
5. STRIX DELICATULUS, *Gould.*
6. HYLOCHELIDON NIGRICANS.
7. MEROPS ORNATUS.
8. DACELO LEACHII, *Vig. & Horsf.*

9. Halcyon sanctus.
10. Halcyon pyrrhopygia, *Gould.*
11. Alcyone pulchra, *Gould.*
12. Artamus albiventris, *Gould.*
13. Artamus leucopygialis, *Gould.*
14. Pardalotus rubricatus, *Gould.*
15. Smicrornis flavescens, *Gould.*
16. Pachycephala melanura.
17. „ rufiventris.

Several specimens, males and females. These agree with Mr. Gould's *P. falcata* in size and general appearance, but on close examination the pectoral band is found to reach and join the carcoverts.

18. Melanodryas picata, *Gould.*
19. Eopsaltria leucura, *Gould.*
20. Colluricincla brunnea, *Gould.*
21. Vanga nigrogularis, *Gould.*
22. Graucalus hypoleucus, *Gould.*
23. „ melanops.
24. Campephaga jardinii, *Rupp.*
25. „ humeralis, *Gould.*
26. Rhipidura dryas, *Gould.* Differs from *R. rufifrons.*, in having a greater extent of white or tail feathers.
27. Siezura nana, *Gould.*
28. Micræca fascinans.

Several specimens similar, but slightly smaller than those from N. S. Wales.

29. Myiagra latirostris, *Gould.*
30. Malurus amabilis, *Gould.*

Having lately received specimens of this and *M. hypoleucus*, Gould, in change of plumage, we can testify that the latter is only the female of the former (*M. amabilis.*)

31. Malurus cruentatus, *Gould.*
32. Sphenæcus galactotes.
33. Cisticola isura, *Gould.*
34. Epthianura crocea, *sp. nov.*

*Adult male.*—Lores, sides of the head, chin, throat, and the whole of the under surface of the body, under and upper tail coverts, bright yellow; across the chest a *(lunate?)*[*] spot of black; crown of the head, sides and back of the neck, and the sides of the chest, olive yellow; back brown, washed with olive yellow; tail blackish brown, the base white, and all (?) the feathers more or less tipped with white; margins of the outer webs, towards the base, yellow; wings brown, darker on the secondaries and upper coverts, primaries narrowly edged with yellow on the outer webs, the coverts and secondaries rather broadly margined with whitish and edged with yellow on the outer webs, secondaries margined with white at the tips; under wing coverts whitish, washed with bright yellow like the body; under surface of the quills light brown, the inner webs towards the base fading into silvery white; legs and bill blackish brown.

Total length, 4·3 in.; wing, 2·4 in.; tail, 1·65 in.; tarsus, 0·7 in.; bill, from forehead 0·5, from nostril 0·3, from gape 0.6.

*Adult female.* All the upper surface dark brown; feathers on head mesially shaded with blackish brown; upper and under tail-coverts yellow, not so bright as in the male; a slight tinge of yellow on the abdomen, flanks, and under wing-coverts; the remainder of the under surface dull white, tinged with brown on the sides and chest; no pectoral spot; wings above blackish, brown on the secondaries, dark brown on primaries, which are tinged with yellow along the margin of the outer webs; wing-coverts tipped with dull white tinged with yellow, secondaries tipped and margined with white; tail blackish brown, the tips and the base white, margins of the outer webs edged with yellow; legs dark brown; bill brown, whitish at base of lower mandible.

Total length, 4·1; wings, 2.3; tail, 1·6; bill, 0·5; tarsus, 0·7.

*Hab.* Norman River, Gulf of Carpentaria. From Mr. Gulliver's collection.

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[*] Many of the feathers being lost from the chest, the exact shape of the pectoral mark cannot be ascertained in this specimen.

It is very interesting to find another well-marked species of this strictly Australian genus, the members of which are among our most beautifully marked birds. The present species may be easily distinguished from its near ally *Epthianura aurifrons*, of *Gould*, by the black mark on the chest.

35. ANTHUS AUSTRALIS, *Vig. and Horsf.*

Slightly smaller than New South Wales specimens, especially in the wings. Length, 3 in.; tail, 2·35.

36. PTENÆDUS RUFESCENS.

37. MYRAFRA HORSFIELDII, *Gould.*

38. POEPHILA PERSONATA, *Gould.*

39. POEPHILA ATROPYGIALIS,* *sp. nov.*

This species may be distinguished from *Poephila cincta* (Gould), which it closely resembles, by the rump and upper tail coverts being black, and the under surface being of a darker hue; the ashy white of the head is not so clear, and less in extent. The note of the bird is quite distinct from that of *P. cincta.*

40. ESTRILDA *(Stictoutera)* BICHENOVII, *Gould.*

41. ESTRILDA *(Bathilda)* RUFICAUDA, *Gould.*

42. CHLAMYDODERA NUCHALIS.

43. SPHECOTHERES FLAVIVENTRIS, *Gould.*

44. POMATOSTOMUS TEMPORALIS.

Slightly smaller, particularly in the wings, than those from New South Wales.

45. POMATOSTOMUS SUPERCILIOSUS.

46. CLIMACTERIS MELANOTUS, *Gould.*

47. SITTELLA STRIATA, *Gould.*

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* Diggles, *Queenslander* newspaper, 1876. We have here adopted the name proposed by Mr. Diggles, of Queensland, for this new species, but more out of compliment to that gentleman than in accordance with the strict rules of nomenclature; as it will be evident to all ornithologists that the merely proposing a name and pointing out a difference in a newspaper can scarcely be looked upon as *describing the species.* We trust our friend will take this hint in the kindly spirit it is meant; and when he again favours us with the announcement of any new species, we hope they will be *fully described.*

48. STIGMATOPS SUBOCCULARIS, *Gould.*

49. ENTOMOPHILA RUFIGULARIS, *Gould.*

In addition to the adults, we find one specimen of an *Entomophila*—probably the young of this species—which has the whole of the under surface of a dull white. This may eventually prove to be the young of *E. albogularis ;* but as the collection contained none of this latter species, as far as we know, it is more probable that it is the young of the former—*E. rufigularis.*

50. MELITHREPTUS ALBOGULARIS, *Gould.*

51. PHILEMON CITREOGULARIS, *Gould.*

52. ZOSTEROPS (TEPHRAS ?) GULLIVERI, *sp. nov.*

The general colour above is of a light ashy brown, darker on the quills of the wings and tail, all the feathers washed with pale olive yellow, which shows more conspicuously on the outer webs of the wing and tail feathers; the forehead and throat of a little brighter yellow; lores blackish, the whole of the under surface and the under wing and tail coverts very pale citron, with a slight wash of buff on the flanks; legs light lead-grey; bill dark, lead-grey above, lower mandible paler.

Total length, 4·2; wings, 2·25; tail, 1·8; tarsus, 0·7; bill from forehead 0·55; from nostril 0·3; from gape 0·6.

This species seems to belong more to the sub-genus *Tephras* than to *Zosterops* proper, in its more rounded wings and tail, and want of the eye-ring; the bill, however, is like that of a true *Zosterops.*

*Hab.* Norman River, Gulf of Carpentaria. From Mr. Gulliver's collection.

53. SCYTHROPS NOVÆ-HOLLANDIÆ.

54. CUCULUS (*Cacomantis*) PALLIDUS.

55. CHALCITES MINUTILLUS, *Gould.*

56. „ BASALIS.

57. CENTROPUS MELANURUS, *Gould.*

58. CALYPTORYNCHUS MACRORYNCHUS, *Gould.*

59. CACATUA GALERETA.

60. CACATUA SANGUINEA, *Gould.*

? Cacatua Gymnops, *Sclater* P. Z. S. 1871, p. 492, fig. 4.

This species was obtained in considerable numbers on the Norman River by Mr. Kendal Broadbent in 1875. All the specimens show the same plumage and the peculiarity of having the orbits bare, but *to a greater extent below* than above the eye, and vary a little in size. This is undoubtedly the true *C. sanguinea* of Gould. Its range extends from Port Essington, where Mr. Gould's specimens were obtained, round the Gulf of Carpentaria country, as far south as the Palmer River.

61. PTISTES COCCINEOPTERUS, *Gould.*

62. GEOPELIA (*Erythrauchæna*) HUMERALIS, *Gould.*

63. GEOPELIA PLACIDA, *Gould.*

64. GEOPELIA (*Stictopelia*) CUNEATA.

65. SYNOICUS CERVINUS, *Gould.*

66. ÆDICNEMUS GRALLARIUS, *Lath.*

The northern variety of this species is remarkable for the length of the tarsi, which might be considered by some ornithologists sufficient to constitute a distinct species, as this peculiarity is constant in all the specimens obtained at the Gulf. The following are the admeasurements showing this characteristic :—

Bill, 2·2 in.; wing, 11·6 in.; tail, 8 in; *tarsus*, 5·6 *in.*; *mid. toe*, 1·9 *in.*

67. LOBIVANELLUS MILES, *Bodd.*; *Gould, Bds. Aust. VI. pl.* 10·

68. HIMANTOPUS LEUCOCEPHALUS, *Gould.*

69. ÆGIALITIS RUFICAPILLUS.

70. TOTANUS BREVIPES, *Cuv.*

Gambetta pulverulentus; *Gould, Hand-bk. Bds. Aust. II., p.* 268, *sp.* 531.

71. TRINGA TENUIROSTRIS, *Horsf.*; *Gould, Hand-bk. Bds. Aust. II., p.* 260, *sp.* 526.

72. TRINGA (*Limnocinclus*) ACCUMINATA, *Horsf.*

73. TOTANUS GLOTTIS, *L.*

Glottis Glottoides, *Vig.*; *Gould, Hand-bk. Bds. Aust. II., p.* 265, *sp.* 529.

74.—HÆMATOPUS, *nov. sp.?*

*? Hæmatopus niger. Cuv.* On examining the Hæmatopi obtained in North Australia, we find one which differs from all

other hitherto recorded Australian species, in having a considerable bare space round the eye; this space is wider in front and above, than behind or below the eye, and, like the bill, is of a reddish carmine colour. The plumage is of a deep sooty black, with little or no gloss, except perhaps on the head and neck; the wing and tail feathers are of a blackish brown; legs deep carmine red.

Total length from forehead to tip of tail, 15 in.; bill from forehead 3·2 in.; from *posterior* margin of nostril 2·5; from gape 2·85; height, about middle of 0·5; width, 0·3; width of upper mandible at the posterior margin of nostril, 0·5; wing, 10 in.; tail, 4·9; tarsus, 2·1; mid. toe, 1·9.

This species is smaller on the whole, and the neck shorter than either of the Australian species; it comes nearest to *H. fuliginosus* of Gould, but may be at once distinguished therefrom, by the large bare space round the eye and the short bill. It is, moreover, smaller in all its measurements.* Should this species prove to be undescribed we propose for it the specific name of *opthalmicus*. †

*Hab.* Bountiful Island. The specimen here described is from Mr. Gulliver's collection.

75.—NUMENIUS CYANOPUS, *Vieill.*

The Norman River specimens differ from those of the same species from New South Wales in having a very decided wash of rufous over the head, chest, and all the upper surface.

76. NUMENIUS MINOR, *Müll.*

77. NUMENIUS UROPYGIALIS, *Gould.*

78. IBIS FALCINELLUS, *L.*

79. THRESKIORNIS STRICTIPENNIS, *Gould.*

80. GERONITICUS SPINICOLLIS, *James.*

81. PLATALEA MELANORHYNGHA, *Reich.*

82. GRUS AUSTRALASIANUS, *Gould.*

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* *H. fuliginosus* has bill, 3·8 in.; tail, 5 in.; wing, 11·6; tarsus, 2·4; mid-toe, 2·25.

† We regret that, from want of a series of the sooty oyster-catchers from other countries to compare with, we are at present unable to determine this question.

83. Xenorhynchus Australis, *Lath.*
84. Nycticorax caledonicus, *Gm.*
85. Ardea pacifica, *Lath.*
86. Herodias asha.
87. Herodias garzetta.
88. Herodias picata, *Gould.*
89. Porphyrio melanotus, *Temm.*
90. Tribonyx ventralis, *Gould.*
91. Fulica australis, *Gould.*
92. Nettapus pulchellus, *Gould.*
93. Dendrocygna vagans.
94. ,, eytoni, *Gould.*
95. Tadorna rajah.
96. Nyroca australis, *Gould.*
97. Malacorhynchus membranaceus.
98. Thalasseus bengalensis.
99. Sylochelidon caspia.
100. Hydrochelidon leucopareia, *Natt.*
101. Sternula placens.
102. Podiceps gularis, *Gould.*
103. Plotus novæ-hollandiæ, *Gould.*
104. Sula fiber, *Linn.*
105. Pelecanus conspicillatus, *Temm.*
106. Tachypetes aquila.

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## Notes on a Collection of Birds from Port Moresby; with descriptions of some *new species*. By E. P. Ramsay, F.L.S.

Mr. A. Goldie, the botanical collector from the firm of Mr. B. S. Williams, the well-known plant merchant, of London, having safely returned from a perilous sojourn of nearly twelve months at Port Moresby, New Guinea, has brought with him a small collection of birds, which he obtained in that district; and having given me an opportunity of examining them, I beg leave to lay before the Society some remarks on the avi-fauna of that but recently known locality.

This collection, numbering over 200 skins, was chiefly obtained on the Laloki River, and within a radius of about fifteen miles of the settlement at Port Moresby. It contains, as will be seen by the list, at least forty Australian *species*. The *genera* inhabiting the south-eastern portion of New Guinea are to a great extent the same as those found at Cape York, and there are, as this and other collections I have examined prove, very few of the strictly or peculiar Papuan forms on the south-eastern portion of New Guinea. I was much gratified to find a fine new species of *Melidora*, of which genus of kingfishers only one was hitherto known. Some of the most interesting specimens contained in this collection are, a fine series of eight specimens of the southern variety of the Goura pigeon—*Goura*, or *Lophyrus coronata, var. D'Albertisi, Salvad;* a fine series of adults and young of the manycoloured *lorius* (*Eos*) *fuscatus*, (*Eos torrida* of G. R. Gray.) Of the beautiful *Cyclopsitta suavissimus* (Sclater) there are some nice specimens in different stages of plumage, and also four specimens of *Paradisea raggiana*, a very distinct and beautiful Bird of Paradise. All of these, with the exception of the Goura, I exhibit this evening.

The following is a complete List of Mr. GOLDIE'S Birds:—

1. ASTUR, sp. This bird agrees, in a great measure, with *Astur Mulleri* (*Wall*), but may, perhaps, prove to be *A. etorques* of Salvadori.

2. HALIAETUS LEUCOGASTER.

3. HALIASTUR SPHENURUS, V.

4. MILVUS AFFINIS, *Gould.*

5. ? BAZA STENOZOA

This bird is very similar to the Australian *Baza cristata*, but has a stronger bill in proportion to the size of the body, which, with the wings and tail, is slightly smaller than the average of

Australian specimens. It can only be looked on as a variety of *B. subcristata*, and may not be the *true B. stenozoa.*

6. STRIX DELICATULUS.

Several fine specimens obtained, not differing from the N. S. Wales examples.

7. ATHENE, sp.

A nestling, and a very interesting specimen, perhaps a young *A. strenua, Gould.* The whole of the head, neck, and all the under surface snow white; on the shafts of some of the down on the chest and abdomen dark brown stripes; under wing coverts white; tail and wings dark brown, with broad transverse bars of blackish; scapulars and wing coverts brown, tips whitish, and barred with whitish-brown, having a rufous tinge. Total length, 9 inches; wings, 6·3; tail, 3; tarsi, 1·1; bill, from forehead 1 inch, from nostril 0·5, from gape 1·1 inch; bill blackish; feet brown, nails black.

8. ? PODARGUS PAPUENSIS.

This bird is one of the numerous varieties of P. papuensis, or perhaps a new species. The general colour is dusky brown, with large white mottlings and spots, particularly on the scapulars, wing coverts, and all the under surface of the body, as well as a band of whitish spots over the eye, and extending over the ear coverts to the neck. The head above and the back are distinctly spotted with white.

9. HIRUNDO FRETENSIS, *Gould.*

This bird agrees with Mr. Gould's description, except that it has no trace of the *band of black* below the red on the chest; the tail feathers have a narrow white margin opposite the oval white spot on the inner web.

Total length. from tip of bill to centre tail feathers, 4·3 in.; bill, from gape, 0·55; width at base across gape, 0·45; wing, 4·2; tarsus, 0·35; tail, to tip of centre feathers, 1·5; to tip of outer feathers, 2·1.

This species may be at once recognised from *H. frontalis* by the size of the bill and the white spots on the inner webs of all except the centre two tail feathers.

10. HYLOCHELIDON NIGRICANS, *Vieil.*

11. EURYSTOMUS PACIFICUS, *Lath.*

12. EURYSTOMUS CRASSIOTRIS, *Sclater.*

Several specimens of this fine species were obtained. Its range of habitat extends from St. Christoval Island to New Britain, from both of which places the Museum has received specimens.

13, MEROPS ORNATUS.

Several specimens, showing the range of the widely distributed species.

14. DACELO LEACHII, *Gould.*

Dacelo intermedius, *Salvadori.*

15. DACELO GAUDICHAUDI, *Quoy and Gaim.*

16. MELIDORA GOLDIEI, *nov. sp.*

*Adult.*—Forehead, whole of the upper part of the head, and the occiput black, each feather margined at the tip with rich light greenish cobalt; a narrow line of buff-tipped feathers extends from the nostrils to over the eye, a similarly tinted line along the base of the bill to below the eye; lores black; ear coverts mostly black, their lower portions mingled with buff; a narrow white collar extends from the ear coverts round the neck, but is separated from the elongated occipital feathers by a narrow band of black, a few of the feathers of the white collar being tinged with buff and blotched on the sides with black; mantle, wing coverts, and scapularies black, each feather with a spot of rich golden buff at the tip; primaries dark brown; secondaries dark brown, with the outer webs margined with rich buff, and the inner series tipped also with buff; back, rump, and upper tail coverts rich blackish brown, each feather tipped with a spot of golden buff; tail rich, shining brown, margined and tipped with buff; under wing coverts white, those at the base of the primaries washed with buff; quills below dark brown; throat and all the under surface of the body and the under tail coverts white, a few feathers on the throat narrowly margined indistinctly with black, base of the feathers black; a few feathers on the sides of the chest tinged with buff; axillaries black, barred with buff; legs, thighs, and flanks, white, spotted with buff, the basal portion of the feathers being black; under surface of the tail feathers brown, tipped with dull light buff; feet yellowish; bill black, the tips and margin of the lower mandible light horn colour.

Total length, 9·9 in.; bill, from forehead 1·9, from gape 2·3, from nostril 1·55; width across gape, 1·05; lower mandible, from gape, 2·2; wing, 4·7; tail, 3·7; tarsus, 0·7; middle toe, without nail, 0·8; its nail, 0·75; hind toe, 0·4.

This fine species of *Melidora*, of which genus only one species, *M. macrorhyncha*, (*Dacelo macrorhynchus, Less Voy. Coq.*) was hitherto known, was discovered by Mr. Goldie on the Laloki River, about ten miles inland from Port Moresby in New Guinea. As it was the only one met with during a sojourn at Port Moresby for nearly twelve months, it must be looked upon as an extremely local, or rare bird. It inhabits the dense parts of the forests. Mr. Goldie states that being the only specimen seen, he had no opportunity of making any observations on its habits.

17. HALCYON SANCTUS, *Vig. and Horsf.*

18. HALCYON MACLEAYI, *Jard. and Selby.*

19. SYMA TORTORO, *Less.*

One female only, showing that the bill in this species has no blackish or dark mark down the culmen, as is always found in the Australian closely allied species, *S. flavirostris, Gould.*

20. TANYSIPTERA GALATEA, *G. R. Gray.*

21. CINNYRIS FRENNATA,
*Nectarinia Australis, Gould.*

22. DICÆUM RUBROCORONATUM, *Sharpe.*

This beautiful little Dicæum was first obtained by Mr. Macleay's collectors during the cruise of the Chevert in 1875. Since then Messrs. Broadbent and Petterd have obtained it at Port Moresby. The species does not appear to be common, although generally distributed over the south-east portion of New Guinea.

23. PTILOTIS NOTATA, *Gould.*

24. PTILOTIS PLUMULUS, *Gould.*

25. PHILEMON NOVÆ-GUINÆ, *Mull and Schl.*

26. Melithreptus albogularis, *Gould.*

27. Oriolus striatus, *Quoy and Gaim.*

28. Sphecotheres flaviventris, *Gould.*

Slightly smaller than the Cape York specimens.

29. Pomatostomus isidori, *Less.*

30. Collukicincla (?) brunnea, *Gould.*

31. Eöpsaltria (?) brunnea, *sp. nov.*

Total length, 5½ in.; wing, 3·3; tail, 2·5; tarsi (shot away); bill, 0·55.

All the upper surface rich brown, with an olive tinge, a little darker on the head; inner webs of wings and tail dark slaty brown, base of the quills whitish, under surface white; lores dark brown, a faint light brown line over the eye; throat tinged with ashy grey, becoming browner on the chest, which is crossed with a brownish band; sides of chest and flanks brown; abdomen, under tail,—and wing-coverts silky white; tail above brown, tinged with olive brown, like the wings, the shafts black, on the under surface of a clearer ashy brown, the shafts of the feathers being white.

This species in general appearance resembles *Pachycephala simplex* of *Gould,* but has no stripes on the breast or on the under surface; the bill is also longer.

32. Myiagra plumbea.

33. Piezorhynchus nitidus, *Gould, var.* Slightly smaller than the Cape York and Queensland specimens.

34. Arses (Ophryzone) telescopthalmus.

35. Monarcha carinata, *Swains.*

Slightly smaller than N. S. Wales specimens.

36. Rhipidura isura, *Gould.* Having examined numerous examples of this flycatcher from Rockingham Bay, Cape York, New Guinea, New Ireland, and the Duke of York Island, I can find no differences that would warrant these being separated into distinct species. I believe the New Guinea birds have been distinguished under the name of *R. gularis, Müll.*, but I have seen no

description of this form under that name. The longitudinal striæ on the chest band are more or less visible in all the specimens.

37. SAULOPROCTA TRICOLOR. Evidently the same as the New Ireland species *S. melaleuca*, of which it is a synonym; it differs very slightly from the Australian *Sauloprocta motacilloides*.

38. CAMPEPHAGA HUMERALIS, *Gould*.

39. CAMPEPHAGA JARDINII, *Rüppell*.

40. GRAUCALUS MELANOPS.

41. ARTAMUS LEUCOPYGIALIS, *Gould*.

42. DICRURUS CARBO[illegible], *M*[illegible] In plumage the same as the New Ireland species, [illegible] ll, which is shorter.

43. VANGA MENTA[illegible] Very like V. argentea, but differing from [illegible] of that species in having the chin black, a patch of [illegible] the base of the primaries extending and widening out co[illegible]derably on to the seventh quill, and in having the *extreme bas*[illegible] of the tail white; the back is also black, and not grey as in *Vang*[illegible] *argenteus*.

Total length, 10 in.; bill, 1·2 in.; wing, 6 in.; tail, 4·5 in.; tarsus, 1·2.

44. VANGA QUOYI, *Less.*

45. GRACULA DUMONTII, *Less.*

46. CORVUS ORRU.

Quite the same as those received from New Britain.

47. GYMNOCORUS SENEX, *Less.*? These specimens differ considerably in depth of color from the plates in the *Voyage de la Coquille*, some birds being almost white, others of a dark brown.

48. DONACOLA NIGRICEPS, *sp. nov.* Closely allied to *Castaneothorax*, but having all the head and neck jet black, with a small hastate spot of whitish on the feathers of the crown; the upper tail coverts, also, are of brighter orange buff. On the whole, the Port Moresby birds are smaller, and of a much darker tint of chestnut on the breast; sides and flanks, barred with white, and tinged with chestnut; under tail coverts black. The young bird shot with an adult has the head and neck of an ashy tint, becoming brown on the chest, and deepening into black on the abdomen and under tail coverts; the back and wings are of a dark chocolate brown;

the rump, upper tail coverts, and two centre tail feathers of a rich orange ochre, deeper than in the adult; tail blackish brown, the outer webs of the inner feathers margined with the same tint as the upper tail coverts; thighs black; flanks blackish brown, tinged with chocolate; total length, 3·5 in.; wing, 1·9 in.; tail, 1·4 in.; tarsi, 0·6 in.; bill, 0·45.*

*Adult*—Total length, 3·8 in.; wing, 2 in.; tail, 1·55 in.; tarsi, 0·6 in.; bill, 0·45.

49. PARADISEA RAGGIANA, *Sclater.*

Adult and young male, and two females.

50. CHLAMYDODERA CERVINIVENTRIS, *Gould.*

51. ? CALORNIS CANTOR.

*Calornis cantoroides, (G. R. Gray). Lamurotornis cantor (Mull.?).*

52. BUCEROS FLAVICOLLIS, *Vieill.*

The egg of this species is pure white, rather pointed at the thin end. In length 2·35 in., by 1·58 in breadth.

53. LORIUS *(Eos)* ARUENSIS.

*? Lorius Heteroclitus (Homb. and Jacq.)*

54. DOMICELLA (*Eos*) FUSCATUS.

*Eos torrida* of *G. R. Gray.*

A fine series of this interesting species, including crimson and yellow-banded varieties, and young. This species belongs to the same section as *Demicella cardinalis.*

55. ? CHALCOPSITTA RUBRIFRONS, *G. R. Gray.*

Some specimens have the occiput varied with deep crimson. It is altogether a smaller species than *Ch. scintillata,* with which it has been confounded. I believe S. Tommaso Salvadori has recently described this variety under the name of *Ch. cloropterus.*

56. ECLECTUS POLYCHLORUS, *Scop.*

57. TRICOGLOSSUS MASSÆNÆ.

58. CYCLOPSITTA SUAVISSIMUS, *Sclater.*

59. ? NASITERNA PUSIO, *Sclater.*

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* This may eventually prove to be the young of another species.

Agrees with Dr. Sclater's description of this species, but is a trifle smaller, and the blue band down the forehead is not so broad; the yellow tint on the side of the head is brighter.

60. Cacatua galerita.

61. Microglossum aterrimum, *Gm.*

Some specimens agreeing with those from Cape York have the crest feathers much more narrow; others again, having the bill larger and the culmen wider, have the plumes of the crest broader. The young have the feathers of the abdomen narrowly margined with yellow, in some forming a band across the body.

62. Centropus melanurus, *Gould.*

Very much smaller and darker in plumage than the Cape York specimens. This is the *Polophilus nigricans* of Salvadori.

63. Cuculus insperatus, *Gould.* ?

64. Scythrops novæ-hollandiæ.

65. Ptilinopus coronulatus, *G. R. Gray.*

66. Ptilopus iozonus, *G. R. Gray.*

67. Carpophaga puella, *Less.*

68. Carpophaga pinon, *Quoy* and *Gaim.*

69. Carpophaga mulleri, *Temm.*

70. Carpophaga spilorrhoa, *G. R. Gray.*

71. Geopelia humeralis.

72. Geopelia placida, *Gould.*

73. Chalcophaps longirostris, *Gould.*

74. Goura D'Albertisi, *Salvadori.*

Several fine specimens, showing the same characteristic white markings of the greater wing coverts.

75. Megapodius duperreyi, *Less.*

76. Megapodius cuvieri, *Less.*

This is undoubtedly a *Megapodius*, and not a *Talegalla*. The egg resembles that of *M. tumulus*, but is much larger, being 3·9 in. in length, 2·48 in breadth, and of a rich salmon-ochre colour.

77. Synoicus cervinus, *Gould.*

78. Numenius uropygialis, *Gould.*

79. Actilis empusa, *L.*

80. Ægialitis hiaticula, *Cuv.*

One specimen, slightly smaller than the European examples, and not so broadly banded with black in front and on the head.

81. GALLINULA RUFICRISSA, *Gould.*

82. PORPHYRIO MELANOPTERUS, *Temm.*

83. BUTOROIDES JAVANICA.

84. HERODIAS IMMACULATA, *Gould.*

85. TADORNA RAJAH, *Less.*

86. DENDROCYGNA GUTTULATA, *Forster.*

87. PLOTUS NOVÆ-HOLLANDIÆ.

Differs but little from the New South Wales examples.

In addition to the Birds obtained, Mr. GOLDIE brought with him a few Mammals and Reptiles, the most conspicuous of which are:—

1. MACROPUS (HALMATURUS ?) CRASSIPES.

*Halmaturus crassipes, mihi,* in Proc. Linn. Soc., N.S.W., part 2, page 162.

A fine series of both adults and young.

2. BELIDEUS ARIEL.

3. PERAMELES. SP.

*? Perameles Novæ-Guineæ.*

4. CUSCUS CHRYSORRHOUS, *Temm., var. Goldiei.*

Two very fine specimens, but, unfortunately, both females; the broad black band round the loins and bright rusty red rump and tail show very conspicuously. Nose and a stripe down the face rufous; orbit surrounded by a conspicuous black ring.

Total length, *without tail,* 26½ in.; tail, 17 in.; head, 4 in. This may eventually prove to be quite a distinct species; at present I prefer to place it merely as a large variety of *C. chrysorrhos.*

5. HYDROSAURUS. SP.

A fine reptile, very similar to the one found in the Solomon Islands. Black above, thickly dotted with bright yellow; below yellowish.

Length, 4 ft. 3 in., with the tail; tail, 2 ft. 3 in.; head, 3·5 in.

## ANNUAL GENERAL MEETING.

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MONDAY, 22ND JANUARY, 1876.

WILLIAM MACLEAY, F.L.S., President, in the chair.

The Minutes of the last Annual Meeting were read and confirmed.

The PRESIDENT delivered the following address:—

GENTLEMEN,—

When I addressed you on the occasion of our last annual meeting, the Linnean Society of New South Wales was in its infancy, and its future, though hopeful, could not be confidently foretold. I then anticipated for it a successful and useful career, but I never expected that it would have made the wonderful progress which it is now my pleasing duty to record.

On the score of pecuniary means I had no misgivings. The long list of members on the roll of the Society gave promise of sufficient funds for meeting all expenses incurred for rooms and printing, but I was not confident that the working members of the Society would persevere in the work which they had so well begun.

My doubts on that ground have been signally dispelled. At every monthly meeting throughout the entire year, original papers have been read on various subjects connected with the science of Natural History, all of them of utility to the student of Nature, and some of them of considerable interest and merit.

Three parts of the proceedings of the Society have been published during the year. The fourth part is in the hands of the printer, and, when published, will complete the first volume of the proceedings.

These facts speak for themselves; they show that we have amongst us some earnest workers, and that the Council of the Society have done their duty in publishing the proceedings without delay, a matter of the utmost consequence in a society formed for original research.

In my present address I shall give you, as well as my opportunities enable me,—

1st. A list of the Papers and Publications on the Natural History of the whole of the Australian region which have been published or come to our knowledge during the year 1876.

2nd. A general survey of the progress of Natural Science during the same period ; and—

3rd. A few observations on the future of the Society, and on some subjects which it is desirable that observation should be directed to.

As regards the first of these—the Natural History of the Australian region—I shall commence with our own proceedings, giving them without comment in the exact order in which the papers were read.

Description of two species of Helix from Queensland. By John Brazier, C.M.Z.S.

Description of thirty-five new species of Land Shells collected during the Chevert Expedition. By John Brazier, C.M.Z.S.

Notes on a Collection of Geological Specimens from Torres Straits and New Guinea. By C. S. Wilkinson, Government Geologist.

List of Land Shells of the Chevert Expedition. By John Brazier, C.M.Z.S.

Description of a new Ptilinopus from New Hebrides. By E. Pierson Ramsay, F.L.S.

Description of a new Plover from North Australia. By E. Pierson Ramsay, F.L.S.

Description of a species of Pupina from Barrow Island. By John Brazier, C.M.Z.S.

The Araneides of the Chevert Expedition. By H. H. B. Bradley, Esq.

The Pleurotomidæ of the Chevert Expedition. By John Brazier, C.M.Z.S.

On a new species of Kangaroo from New Guinea. By E. Pierson Ramsay, F.L.S.

Notes on some New Guinea Coleoptera. By William Macleay, F.L.S.

List of Marine Shells, with descriptions of the new species collected during the Chevert Expedition. By John Brazier, C.M.Z.S.

List of Australian Game Birds and other species which should be protected by the "Game Preservation Act." By E. Pierson Ramsay, F.L.S., Curator of the Museum, Sydney.

Remarks on a supposed new species of *Poephila*. By E. Pierson Ramsay, F.L.S.

List of Shells collected during the Chevert Expedition. By John Brazier, C.M.Z.S.

Remarks on the large number of Game Birds which have of late been offered for sale in Sydney. By E. Pierson Ramsay, F.L.S., Curator of the Australian Museum.

On some new forms of Arachnidæ. By H. H. B. Bradley, Esq. (with plate).

List of Shells collected during the Chevert Expedition. By John Brazier, C.M.Z.S.

On a new genus of Arachnidæ. By H. H. B. Bradley, Esq.

Observations on the genus *Risella*. By Rev. J. E. Tenison-Woods, F.L.S., F.G.S., &c., &c.

List of Shells collected during the Chevert Expedition, with descriptions of the new species. By John Brazier, C.M.Z.S.

The Ichthyology of the Chevert Expedition. By Haynes Gibbes Alleyne, M.D., and William Macleay, F.L.S., (with plates).

Note on *Poephila* Gouldiæ. By E. Pierson Ramsay, F.L.S.

The Mollusca of the Chevert Expedition. By John Brazier, C.M.Z.S.

Notes on the Entomological Fauna of New Ireland. By William Macleay, F.L.S.

Remarks on *Lævicardium Beechei.* By John Brazier, C.M.Z.S.

Descriptions of new species of *Halmaturus* and *Parameles* from New Ireland. By E. P. Ramsay, F.L.S., Curator of the Australian Museum.

The Mollusca of the Chevert Expedition (continued). By John Brazier, C.M.Z.S.

The Ichthyology of the Voyage of the Chevert. Part II. By H. G. Alleyne, M.D., and William Macleay, F.L.S.

Notes on a new Wallaby from the Palm Islands. By E. Pierson Ramsay, F.L.S.

Notes on some peculiarities in the Nidification of two species of *Geobasileus.* By George Masters.

The Mollusca of the Chevert Expedition (continued). By John Brazier, C.M.Z.S.

On the Vertebrate Fauna of New Britain, New Ireland, and the Duke of York Island. By E. Pierson Ramsay, F.L.S.

Notes on some new Birds from the Norman River and the Gulf of Carpentaria. By E. Pierson Ramsay, F.L.S.

Notes on a Collection of Birds made at Port Moresby by Mr. Goldie, and presented by him to the Australian Museum, with descriptions of new species. By E. Pierson Ramsay, F.L.S.

The Royal Society of New South Wales has published a volume of its Transactions during the year, which contains the proceedings of the previous year—1875. I have not been able to ascertain that any portion of the proceedings of 1876 have been published, nor do I know whether any Papers bearing on Natural History have been read at its meetings, excepting two, which have appeared in the columns of the *Herald*.

On the Periodicity of Droughts. By Mr. Russell, Government Astronomer; and,

On the Effects of Forests on Climate. By the Rev. W. B. Clarke, F.R.S., &c., &c.

Of publications not connected with any Society, there have been several throughout the year. Mr. Fitzgerald has issued the second part of his beautifully illustrated work on Australian Orchids; Professor Liversidge has given us a treatise on the Minerals of New South Wales; and, from the Department of Mines, comes a "Report of Progress of the Geological Survey of New South Wales," by C. S. Wilkinson, F.G.S., Government Geologist, with "Descriptive Notes on the Tertiary Flora of New South Wales," by Baron F. Von Müeller, C.M.G., M. and Ph. D., F.R.S.

In the neighbouring colony of Victoria considerable progress has been exhibited during the past year in scientific research, but not much in those branches of science which are usually comprised under the term Natural History. The Papers read at the meetings of the Royal Society of Victoria related exclusively to Astronomy, Chemistry, Mathematics, and Mechanics.

The Medical Society of Victoria, also, has been doing good work. A number of Papers have been read of scientific merit, and considerable interest has been excited by discussions upon the subject of the efficacy of the injection of ammonia into the veins in cases of snake poisoning, but the mass of the Papers have been of too completely a professional character to come properly into the category of Papers on the Science of Natural History.

The following Papers have been read at the meetings of the Microscopical Society of Victoria during 1876 :—

On the *Desmidraceæ* and *Confervaceæ*. By Charles Maplestone.

On a Microscopic Examination of Milk.

On the Use of the Microscope in Post Mortem Analysis.

On the Vinegar Plant; and on Tappa, made by the Fijians from the inner bark of the Artocarpus (Bread Fruit). By Mr. Sydney Gibbons.

On the Micrology of some Igneous Dykes of North Gippsland. By Mr. A. W. Howitt.

On the Simulation of Death and Tenacity of Life exhibited by many Australian Coleoptera. By Mr. C. French.

On a *Conferva* inhabited by a *Rotifer*.

On a Coccus-like insect, with triple hairs twisted together; and two Papers on mounting and preparing objects for the Microscope. By Dr. Ralph, the President of the Society.

I have not heard of anything having been done by the Zoological and Acclimatisation Society of Victoria during the past year.

Baron Von Müeller has added considerably to our knowledge of the botany of Australia and New Guinea by several publications.

In Tasmania several interesting Papers on the Mollusca of that colony have been read at the meetings of the Royal Society of Tasmania, by the Rev. J. E. Tenison-Woods, F. G. S., F.L.S., &c.

South Australia seems not to have contributed anything to the literature of Natural History during the year.

In the Queensland Philosophical Society a Paper has been read on some new and rare specimens of Australian Birds, by Mr. S. Diggles.

I have been unable to procure a copy, or any report, of the Proceedings of the New Zealand Institute, but I believe that eight volumes of their Transactions have been published, and that the ninth is promised very shortly.

Among foreign publications the following relate, more or less, to Australia:—

In the Proceedings of the Zoological Society of London—

Letters from Signor L. D'Albertis, C.M.Z.S., giving some account of several Excursions into Southern New Guinea.

On the Habits of the Fishes of the genus Antennarius. By the Rev. S. J. Whitmee, of Samoa, C.M.Z.S.

A Monograph of the genus *Taphozous*, Geoff. By G. E. Dobson, M.A., M.B., F.L.S., &c.

Notes on the Fruit Pigeons of the genus *Chrysœna*. By Otto Finsch, C.M.Z.S.

List of Birds met with in North-Eastern Queensland, chiefly at Rockingham Bay. By E. Pierson Ramsay, F.L.S.

Description of the Eggs and Young of *Rallina tricolor*, from Rockingham Bay By E. Pierson Ramsay, F.L.S.

On a Collection of Butterflies from the New Hebrides and Loyalty Islands, with descriptions of new species. By Arthur G. Butler, F.L.S., F.Z.S., &c.

On a small Collection of Butterflies from Fiji. By Arthur G. Butler, F.L.S., F.Z.S., &c.

On a new species of Crown Pigeon. By Otto Finsch, Ph. D., C.M.Z.S.

Notice of the twenty-second of his series of Memoirs on the extinct Birds of the genus *Dinornis*. By Professor Owen, C.B., F.R.S., &c.

On *Pristorhamphus versteri*, a new genus and species of Bird from the Arfak Mountains, New Guinea. By Otto Finsch, Ph. D., C.M.Z.S.

Characters of six new Polynesian Birds in the Museum Goddeffroy, at Hamburg. By Otto Finsch, Ph. D., C.M.Z.S.

On the Eared Seals of the Islands of St. Paul and Amsterdam, with a description of the Fur Seal of New Zealand, and a re-arrangement of the New Zealand *Otariidæ* By J. W. Clark, F.Z.S.

Letter on Birds, transmitted to the Society from Duke of York's Island. By Mr. G. Brown, C.M.Z.S.

Exhibition of, and remarks on, three Feather Mats made by Maoris of New Zealand. By Dr. Hector.

On a new Ziphioid Whale. By Julius Von Haast, Ph. D., F.R.S., Director of the Canterbury Museum, Christchurch, New Zealand.

Notes on some Fijian Birds, including description of a new genus and species. By Otto Finsch, Ph. D., C.M.Z.S.

On *Ceratodus Forsteri*, with observation on the Classification of Fishes. By Professor T. H. Huxley, F.R.S., &c.

On the Land Shells of Taviuni, Fiji Islands, with descriptions of new species. By E. A. Liardet.

List of Birds met with in North-Eastern Queensland, chiefly at Rockingham Bay. Part II. By E. Pierson Ramsay, F.L.S., C.M.Z.S.

On the Structure of the Mucous Membrane of the Stomach in the Kangaroos. By Edward A. Schäfer, Assistant Professor of Physiology, and D. James Williams, Student of Medicine, in University College, London.

On a small Collection of Butterflies from the New Hebrides. By Arthur G. Butler, F.L.S., F.Z.S., &c.

On a new order and some new genera of Arachnida from Kerguelen's Land. By the Rev. O. P. Cambridge, M.A., C.M.Z.S., Hon. Mem. New Zealand Institute.

Note on *Antechinus minutissimus* from Rockhampton. By Dr. Gunther.

Remarks on a series of Skins of the Parrots of the Fiji Islands, obtained by Mr. E. Layard, F.Z.S. By Mr. Sclater.

Description of a new Thrush from Taviuni, Fiji Islands. By E. L. Layard, C.M.G., F.Z.S., &c.

Further notes on *Oulodon*, a new genus of Ziphioid Whales from the New Zealand Seas. By Julius Von Haast, Ph. D., F.R.S., Director Canterbury Museum, New Zealand.

On the Birds collected by Dr. Comrie on the South-East Coast of New Guinea during the Survey of H.M.S. Basilisk. By P. L. Sclater, M.A., F.R.S., Secretary to the Society.

Notes on the Skeleton of *Ziphius Novæ Zealandiæ.* By Julius Von Haast, Ph. D., F.R.S., with remarks by Professor Flower, F.R.S.

Notes on *Mesoplodon Floweri.* By Julius Von Haast, Ph. D., F.L.S.

Notes on the Birds of the Navigators' and Friendly Islands, with additions to the Ornithology of Fiji. By E. L. Layard, C.M.G., F.Z.S., &c.

Descriptions of two new Parrots from New Guinea. By P. L. Sclater, M.A., F.R.S.

The Journal of the Linnean Society of London, in so far at least as its publications have reached this country, contains nothing in its Zoological division specially pertaining to this quarter of the globe, but the Botanical papers are in unusual number. Among them we have—

On the Polynesian Ferns of the Challenger Expedition. By J. G. Baker, F.L.S.

On some Orchidaceæ collected by Mr. Mosely, of the Challenger Expedition, in the Admiralty Islands, Ternate, and Cape York, one of which forms the type of a new section of the genus *Dendrobium*. By Professor H. G. Reichenbach.

Note on *Boëa Commersonii*. By Henry Trimen, M.B., F.L.S.

Lichenes Terræ Kergueleni: an enumeration of the Lichens collected in Kerguelen's Land by the Rev. A. E. Eaton, during the Venus Transit Expedition in 1874-1875. By the Rev. James M. Crombie, F.L.S., &c.

A list of the *Musci* and *Hepaticæ* collected in Kerguelen's Land by the Rev. A. E. Eaton, A.M. By William Mitten, A.L.S.

Notes on *Algæ* found at Kerguelen's Land, by the Rev. E. A. Eaton, A.M. By G. Dickie, A.M., M.D., F.L.S., Professor of Botany in the University of Aberdeen.

Species ac genera nova Algarum aquæ dulcis quæ sunt inventa in speciminibus in Expeditione Vener. transit. hieme 1874-1875, in Insula Kerguelensi a clar. Eaton, collectis. Auctori, Paulo Fredericko Reinsch.

Report on the Fungi collected in Kerguelen's Land by the Rev. E. A. Eaton, during the stay of the Transit of Venus Expedition of 1874-75. By the Rev. M. J. Berkeley, M.A., F.L.S., &c.

Contributions to the Botany of the Expedition of H.M.S. Challenger; Algæ, chiefly Polynesian. By Professor George Dickie, M.D., F.L.S.

Enumeration of Fungi collected during the Expedition of the Challenger. By the Rev. M. J. Berkeley, M.A., F.L.S.

Further Notes on the Plants of Kerguelen, with some remarks on the Insects. By H. N. Moseley, M.A., Naturalist to H.M.S. Challenger.

On the Diatomaceous gatherings made at Kerguelen's Land by H. N. Moseley, M.A.. By the Rev. E. O'Meara, M.A.

On *Musci* and *Hepaticæ* collected by H. N. Moseley, M.A., H.M.S. Challenger. By William Mitten, A.L.S.

Notes on Plants collected and observed at the Admiralty Islands in March, 1875. By H. N. Moseley, M.A.

That very excellent periodical, The Annals and Magazine of Natural History, has the following articles relating to the Australian region:—

On a young specimen of Pelagonemertes Rollestoni. By H. N. Moseley, M.A., H.M.S. Challenger.

On three new and curious forms of Arachnida. By the Rev. O. P. Cambridge, M.A., C.M.Z.S, Hon. Member New Zealand Institute.

On the Bower Birds of Australia, with the description of a new species. By John Gould, F.R.S.

On some species of *Terebratulina Waldheimia* and *Terebratella,* from the upper tertiary deposits of Mount Gambier and the Murray River Cliffs, South Australia. By R. Etheridge, Jun., F.G.S.

Critical Notes on the New Zealand *Hydroida,* sub-order *Thecaphora.* By Miller Coughtrey, M.B., C.M. Edin. Univ., President of the Dunedin Naturalist's Club, New Zealand, &c.

Descriptions of new genera and species of New Zealand Coleoptera. Part II. By Francis P. Pascoe, F.L.S., &c.

Descriptions of two new Coleopterous Insects, belonging to the families *Buprestidae* and *Melolonthidae.* By Charles O. Waterhouse.

Descriptions of species of *Asteridæ* and *Ophiuridae,* from Kerguelen's Land. By Edgar A. Smith, F.Z.S, Zoological Department, British Museum.

Descriptions of some new species of Hydroida from Kerguelen's Land. By Professor Allman, M.D., L.L.D., F.R.S., P.L.S.

Descriptions of some new species of Polyzoa from Kerguelen's Land. By Professor G. Busk, F.R.S.

On a new species of Coris from the Molucca Archipelago. By Dr. A. A. W. Hubrecht, Curator of the Leyden Museum.

Descriptions of some new species of *Crustacea*, chiefly from New Zealand. By Edward J. Miers, F.L.S., of the Zoological Department, British Museum.

Description of a new species of *Chalinolobus*, from Australia. By G. E. Dobson, M.A., M.B., F.LS., &c.

Description ot a new species of the genus *Merula*, from the Fiji Islands. By E. L. Layard, C.M.G., F.Z.S., &c.

Descriptions of some new species of *Annelida*, from Kerguelen's Land. By W. C. M'Intosh.

On the Range of the Striped Opossum, and on the Natural History of the Rockingham Bay District. By E. Pierson Ramsay, Curator Australian Museum, Sydney.

Diagnosis of some species of *Mallophaga* collected by the Rev. A. E. Eaton during the late Transit of Venus Expedition to Kerguelen's Land. By Professor C. Giebel, of Halle.

Remarks on Fishes, with descriptions of new species in the British Museum, chiefly from Southern Seas. By Dr. Albert Günther, F.R.S.

On the Urogenital Apparatus of a Blennioid Fish, from Tasmania. By Dr. Albert Günther, F.R.S.

On the Colydiidæ of New Zealand. By D. Sharp.

Descriptions of new genera and species of New Zealand Coleoptera. Part III. By Francis P. Pascoe, F.L.S., &c.

On a small collection of Lepidoptera from Cape York and the South-east Coast of New Guinea. By Arthur G. Butler, F.L.S., F.Z.S., &c.

On a new Victorian Graptolite. By Frederick M'Coy, Professor of Natural Science in the University of Melbourne.

On a collection of Lepidoptera from Port Moresby, New Guinea. By Arthur G. Butler, F.L.S., &c.

On the discovery of the *Trigonia acuticostata* (M'Coy) in the living state. By F. [illegible]y, Professor of Natural Science in the Melbourne University.

On the Fur Seals of the Islands St. Paul and Amsterdam. By Professor W. Peters.

On the mode in which the young of the New Zealand *Astacidæ* attach themselves to the mother. By Professor J. Wood-Mason.

On a new genus and species of *Collembola* from Kerguelen's Land. By Sir John Lubbock, Bart., M.P.

On the *Anthribidæ* of New Zealand. By D. Sharp.

On *Peripatus Novæ Zealandiæ.* By Captain F. W. Hutton, Director of the Otago Museum.

Some interesting Papers also have been read during the year at the meetings of the Royal Society of London on the Marine Fauna of the Southern Ocean, from the pens of Mr. H. M. Mosely and the late lamented Dr. Von Willemöes-Suhm, both of the Challenger Expedition.

In the Geological Society of London the Papers read having direct reference to Australia were—

On a new Fossil Crab from the Tertiary of New Zealand. By Henry Woodward, F.R.S., F.G.S.

On some Fossil Reef-building Corals from the Tertiary deposits of Tasmania. By Professor P. Martin Duncan, M.B., F.R.S., &c., President.

On the Echinodermata of the Australian Cainozoic (Tertiary) deposits. By Professor P. Martin Duncan, M.B., F.R.S., President.

The proceeedings of the various Foreign Societies of Natural History do not, as far as I am aware, contain much during this year on Australian subjects; indeed, with the exception of a series of Papers published in the Annals of the "Museo Civico" of Genoa—on the Coleoptera of New Guinea, by Dr. Gestro; on the Birds, by Tommaso Salvadori; and on the Mollusca, by G. Fapparone Ganefri—I cannot recall to my memory having seen any such Papers in any foreign periodical.

Imperfect as I admit this portion of my Address to be, I am afraid that my attempt to give you a review of the progress of the Science of Natural History generally must necessarily be still more so. It is certainly not in my power to give you more than a very incomplete sketch of the advances made in Natural Science during the year 1876.

The number of books published, lectures given, and associations formed, seem to be each year in excess of the preceding; and it is by no means an easy task to keep up even a superficial acquaintance with the accumulating facts and theories of the day. England, once far behind France and Germany in the pursuit of Science, seems now to have taken the first place; while Russia, Italy, and America seem determined not to be left far behind in the race. In the latter country, in particular, the desire to promote Scientific education is evinced by the prominent place given to Natural Science in their Universities, and by the tempting offers which they hold out to men of the highest European reputation to enter their service. It would be well, I think, if in this respect Australia were to follow her example.

The book of the year has been "The Geographical Distribution of Animals," by Alfred Russell Wallace. It is a large work, in two volumes, is replete with information, and is a book which should be studied by every naturalist. Mr. Wallace's chief object throughout the work has been, no doubt, to find additional evidence in favour of the theory of evolution by natural selection, a doctrine of which he was the real originator. But, in treating of the theory, he does not, like some of the champions of the cause, violently assert, as an ascertained truth, that which at best is only a *plausible hypothesis.* On the contrary, Mr. Wallace, throughout the whole of his delightful book, reasons well and fairly.

While on this subject I may mention, and also recommend, another book, published in the early part of the year. It is a reprint of two lectures originally delivered in the Botanical Theatre of University College, London, and is entitled "Evolution of the Human Race, from Apes: A Doctrine unsanctioned by Science." By Thomas Wharton Jones, F.R.S., &c. Professor Jones, in his first lecture, deals with the natural selection theory of Darwin. He argues, with great force, that the apparently general gradation, in form and structure, of all living forms, is no proof of evolution, but rather of the Divine Idea of an Almighty Power. The second Lecture treats chiefly of Haeckel's scheme of the line of man's descent from lower animals, and the following summary, exhibiting the extravagance of Haeckel's Phylogenetic hypotheses, is extracted from the concluding portion of the Lecture :—

"Man, as he now is, was originally evolved from hypothetical "speechless *ape-men;* these ape-men, again, were evolved from "hypothetical *men apes without tails,* like the orang; these men-"apes from hypothetical *apes with tails,* like the nosed apes; these "tailed apes from hypothetical *half-apes,* like the lemur; these "half-apes from hypothetical *marsupial animals,* like the kangaroo "rat; these marsupialia from hypothetical *monotremata,* like the "ornithorhynchus, but without the duck's-bill; these monotremata "from hypothetical *lizard-like* creatures, of which no living "resemblance is known; these lizard-like creatures from hypo-

"thetical water *newts*, or *salamanders;* these salamanders from "hypothetical *perrenni-branchiate batrachians,* like the *proteus* or "*axolotl;* these perenni-branchiates from hypothetical *fishes,* like "the *Lepido-siren;* these double-breathing fishes, from hypo- "thetical fishes of the *shark-tribe;* these proto-fishes from "hypothetical *lampreys;* these cyclostomata from hypothetical "*Amphioxi* or *Launcelets,* which lowest of vertebrate animals "again were evolved from a hypothetical form of *Ascidian mollusc* "or *worm,* low in the scale of invertebrate animals; these asci- "dian worms from hypothetical *soft or cavitary worms;* these from "hypothetical *solid worms;* these from hypothetical *Gastrœada;* "these from hypothetical *Planœada;* these from hypothetical "*Lynamœbia,* consisting of a community of homogeneous cells; these "protozoa from hypothetical *single-cell animals;* and these, lastly, "from hypothetical *spontaneously generated cytodes.*"

But the settlement of such a question as that of *spontaneous generation* is a matter of much more importance to the world at large than the most ingenious speculations upon subjects of which we know nothing, and are never likely to know much.

The chief scientific discovery of the year is the entire disproval of the doctrine.

For a number of years past Dr. Bastian has been conducting a series of experiments, which satisfied him that generation of low organisms could take place in infusions not exposed to the air, and in which all living organisms had been destroyed by heat.

Consequent on the results of these experiments, the doctrine of spontaneous generation and heterogenesis grew in strength, and even eminent scientific men were reluctantly compelled to a silent acquiescence, because they could not in any way dispute the apparent facts.

Another reason, no doubt, why such a doctrine readily found supporters and well-wishers, was, that it completely chimed in with the popular chimera of Evolution. The difficulty presented to that theory in the apparent immutability of species, was quite removed when its disciples could point to Dr. Bastian's experiments as evidences of evolution and heterogenesis going on under their very eyes.

But Professor Tyndall, who, as we know, is capable of the wildest flights of imagination when speculating upon what occurred a few millions of years ago, was not disposed to believe that any thing of the kind could occur in the present day. His thoroughly scientific mind would not admit the possibility of living and distinct organisms being generated from infusions of hay or beef or mutton, or any thing else. He therefore instituted a series of investigations and experiments, the results of which he communicated to the Royal Society in January last. He was led to believe that the germs of many organisms, much too minute to be visible under the most powerful microscope, were constantly floating in the air. He also thought that these floating germs might not be so destructible by heat as the organisms themselves, which it is known are all killed by a heat of 300° of Fahrenheit. He determined, therefore, to endeavour to supply the infusions with an atmosphere deprived of all foreign atoms.

The ingenious manner in which he effected this is given in the paper before alluded to.

The absolutely moteless condition of the atmosphere thus obtained was shown by the fact that a concentrated beam of light passed through the vessel containing the atmosphere was invisible, though vivid before it entered and after it passed through. Hundreds of these experiments were made with every imaginable infusion; and wherever the air was thus deprived of all floating germs, and the infusion subjected to the usual heat, no *bacteria* or other organisms ever made their appearance.

This result, so beautifully worked out by Professor Tyndall, has been sustained by the investigations of the Rev. W. H. Dallinger and Dr. Drysdale.

Two papers on this subject by Mr. Dallinger, published in the April and October numbers of the "Popular Science Review," are well worth perusal. The first is entitled "Professor Tyndall's Experiments on Spontaneous Generation, and Dr. Bastian's Position;" the second is headed "Practical Notes on *Heterogenesis*, a reputed feature of Spontaneous Generation."

A very interesting volume of the "International Scientific Series" was published early in the year—"Animal Parasites and Messmates," by Professor Van Beneden. The author exhibits, as might be expected from his previous history, a very extensive acquaintance with his subject, but the work throughout is more of a popular than a scientific character.

Professor Haeckel, who is certainly voluminous enough, if he is nothing else, has published lately a work on what he calls "Perigenesis." I have not seen the book, but, judging from notices of it, I think it must be about as unintelligible and extravagant as his other productions.

Some of the most valuable contributions to our knowlege of Nature have been supplied by means of lectures delivered in various places and under various conditions throughout the year. I may instance the Hunterian Lectures on the Relation of Extinct to Existing Mammalia, by Professor Flower, F.R.S., and lectures on the Evidence as to the Origin of Existing Vertebrate Animals, by Professor Huxley, F.R.S., &c. These last consisted of a course of six lectures to working men, delivered in the theatre of the Royal School of Mines. I hope the time is not far distant when efforts will be made here to popularize and extend scientific knowledge on such subjects as Biology, Geology, Physics, and Chemistry, in a similar way. There are many whose circumstances and occupations do not admit of their attendance at day classes at the University, who would gladly avail themselves of an opportunity of acquiring some knowledge of science from competent masters.

The annual meeting of the British Association for the Advancement of Science was held last September at Glasgow, and has certainly not fallen short of any of its predecessors in the interesting character of the addresses and papers read. The President, Professor Andrews, of Belfast, gave an inaugural address of great length, full of sound and comprehensive views, with special reference to the subject of scientific education. The presidents of the various sections also delivered addresses, and to one of these —that of Alfred Russell Wallace, President of the Biological Section—I am desirous of calling special attention. His address deals at great length, and in a most interesting and instructive way, with three subjects—1st. The influence of locality, or of some unknown local causes in determining the colours of insects, and, to a less extent, of birds; 2nd. The way in which certain peculiarities in the distribution of plants may have been brought about by their dependence on insects; 3rd. The present state of our knowledge as to the antiquity and early history of mankind. Upon this last subject Mr. Wallace makes some admissions which, coming from a man who has always been in the van of the Evolution movement, are rather remarkable.

After pointing out that no evidence has ever been found of an approximation in the skull of man to that of the ape tribe, and that the oldest known crania—those from the Engis and Cro-magnon caves—show no marks of degradation, but are fair average human skulls, he says:—"The conclusion which I think we must arrive at is that, if man has been developed from a common ancestor with all existing apes, and *by no other agencies but such as have affected their development*, then he must have existed in something approaching his present form during the tertiary period—and not merely existed, but predominated in numbers wherever suitable conditions prevailed. If, then, continued researches in all parts of Europe and Asia fail to bring to light any proofs of his presence, it will be at least a presumption that he came into existence at a much later date, and by a much more rapid process of development. In that case it will be a fair argument that, just as he is in his mental and moral nature, his capacities and aspirations, so infinitely raised above the brutes, so his origin is due to distinct and higher agencies than such as have affected their development." This appears to me to be equivalent to a complete renunciation of the doctrine of Evolution.

The return of H.M.S. Challenger from her scientific cruise is not one of the least notable events of the year. A general sketch of the results was given in an address by Sir C. Wyville Thomson, at Glasgow, to the British Association, but it will probably be some time before we get a detailed account of the discoveries and observations made by the distinguished men who formed the scientific staff of the Expedition.

In this sketch of the Progress of Science in 1876, I have made no mention of the multiplicity of publications on special subjects which have been constantly appearing. I have simply alluded to a few works of general interest which have excited, or are likely to excite, the special attention of the scientific world.

And now, gentlemen, before I close this address I wish to return again to the subject with which I began it—"The Society." I have already stated that the progress of the Society hitherto has been, as far as useful work is concerned, far beyond my most sanguine expectations; and that as regards the value and utility, and I may add quantity, of its publications, it would compare favourably with similar societies throughout the world.

It will not, therefore, be supposed that I in any way seek to disparage what has been done, if I proceed to point out what we may do, or that I think the study of any branch of Natural History undesirable, because I may desire the field of enquiry to be widened. And there are a good many subjects to which I should like to see more attention paid. It has always seemed to me rather anomalous that a Society named after the most illustrious botanist the world has ever produced, should not have apparently a single working botanist among its members.

I should like also to see more attention paid to the Sciences of Geology and Palœontology. But there are some branches of Biological Science which have never yet occupied the attention of any of our contributors, and which are of more importance to mankind, and of more real interest to the man of science, than the study or contemplation of the most gorgeous birds, or the most perfect and beautiful flowers. I mean the study of the history, metamorphoses, and conditions of existence of those low forms of animal and vegetable life which are really the most formidable enemies of man, both in his person and property, and which are, I believe, only formidable because of our ignorance of their history. I do not allude now to the Infusorial forms which seem to have an active agency in the processes of fermentation and putrefaction. The study of these very minute organisms has excited of late years so much attention among the Physiologists of Europe, that we here, with inferior appliances, less leisure, and perhaps less skill, may very properly leave that description of investigation for the present in other and better hands. Of its importance, however, there cannot be a question, and now that the spontaneous generation of Bacteria, &c., has been proved to be a fallacy, there seems to be no limit to the important results that may accrue to humanity from a perfect acquaintance with the life cycle of these minute organisms. It may even lead, as Pasteur confidently affirms it will, to the complete removal of parasitic diseases from the earth. But there are many other living organisms from which man himself is constantly suffering, both directly and indirectly, whose history might, I think, with diligence and application be worked out. These are, in the Animal Kingdom, the Entozoa and the Acaridae, and perhaps other simpler and less known forms; and in the Vegetable Kingdom the obscure fungoid growths which seem to be the cause of nearly all the most fatal maladies to which human beings, and the Animal Kingdom generally, are subject. In the investigation of the animal parasites much has been done of late years, particularly among the Entozoa, by the researches of Professor Van Beneden, Dr. Cobbold, and others, and their results have shown clearly the advantages to be derived, in a sanitary point of view, from our improved knowledge. As regards the mere cure of disease, I do not know that we have gained much. Medical men knew how to destroy a *Tœnia,* and eradicate the *Itch,* long before they know the history of the one, or that the other was caused by a subcutaneous *Acarus.* But the value of these discoveries as a means to the prevention of disease is incalculable. Thus, since it has been ascertained that the *Cysticercus cellulosœ,* or measle of the pig, is the larval or scolex condition of the *Tœnia solium* of the man, we know that no one can suffer from that tapeworm unless he is an eater of raw or under-cooked pork. In the same way the *Cysticercus* of the calf becomes a perfect *Tœnia mediocanellata* in the human being, but it can only be introduced there by eating uncooked veal or beef.

The discovery, due chiefly to Van Beneden and Dr. Cobbold, that the Entozoa, to complete their cycle of existence, must inhabit under widely different forms, two equally widely different hosts, furnishes us with the means of understanding much which was previously unintelligible, and gives us, at the same time, a possible explanation of subjects on which we are, up to the present time, quite in the dark.

For instance, there are some most formidable diseases which are universally ascribed to the action of poisonous germs inhaled from sewers or cesspools, or swallowed in impure water—such as Diphtheria, Dysentery, Typhoid or Enteric Fever, and Cholera. The first of these we know to be caused by a species of *Oidium,* a fungus of the same genus as that which produces the vine disease, *Oidium Tuckeri,* but we know nothing of the history of the plant beyond that it seems to thrive best in ill-drained localities, and that the disease it causes is *not* directly infectious. Dysentery also is not directly infectious, though when it breaks out in any locality it generally spreads with amazing rapidity. Typhoid Fever and

Cholera will in like manner sometimes spread themselves rapidly in certain spots subject to certain influences, but they are generally admitted *not* to be directly infectious. I think it may fairly be deduced from these peculiarities that the plants to which these diseases owe their origin, pass through different stages of existence much in the same way as animal parasites have been found to do.

There is nothing improbable or contrary to what we know of Nature in this hypothesis. The lowest forms of animal and vegetable life approach one another so closely that there are whole families which have been classed by eminent naturalists sometimes in the one kingdom and sometimes in the other.

It is easy also to imagine that a fungus which would germinate freely in its proper "pabulum," and send out its fertile spores in myriads throughout surrounding space, might be incapable of perfection and reproduction when conveyed to the body of a human being, though quite capable of producing violent disease. And accepting this as, I think, a probable solution of the question, we would naturally be led to infer that diseases *directly* infectious, which are supposed to have a somewhat similar origin, such as Measles, Scarlet Fever, and Small-pox, are caused by vegetable growths, which attain perfection and have the power of reproduction in the human body.

At all events, it must be admitted that by studying and following out the life history of these parasitic plants, we shall be in a better position than we now are to confer an immense benefit on mankind by limiting the range of these diseases, if they cannot be altogether extirpated.

There is an immense field open here for investigation, and I am most desirous that this very important branch of Biological Science should receive the attention it merits from the members of this Society. And I would recommend this line of inquiry more particularly to those members who belong to the noble profession of medicine, as by the nature of their education and their opportunities of observation, they are of all others the best qualified for such investigations.

Gentlemen,—I must now conclude. I dare say I shall be charged with inviting your attention to a subject in itself uninviting, but to the man of Science no inquiry can be distasteful which may lead to such grand results as I have pointed out, and surely to the medical man the acquirement of a knowledge of the source and cause of disease must be a nobler object of ambition than the highest skill in the empirical treatment of symptoms.

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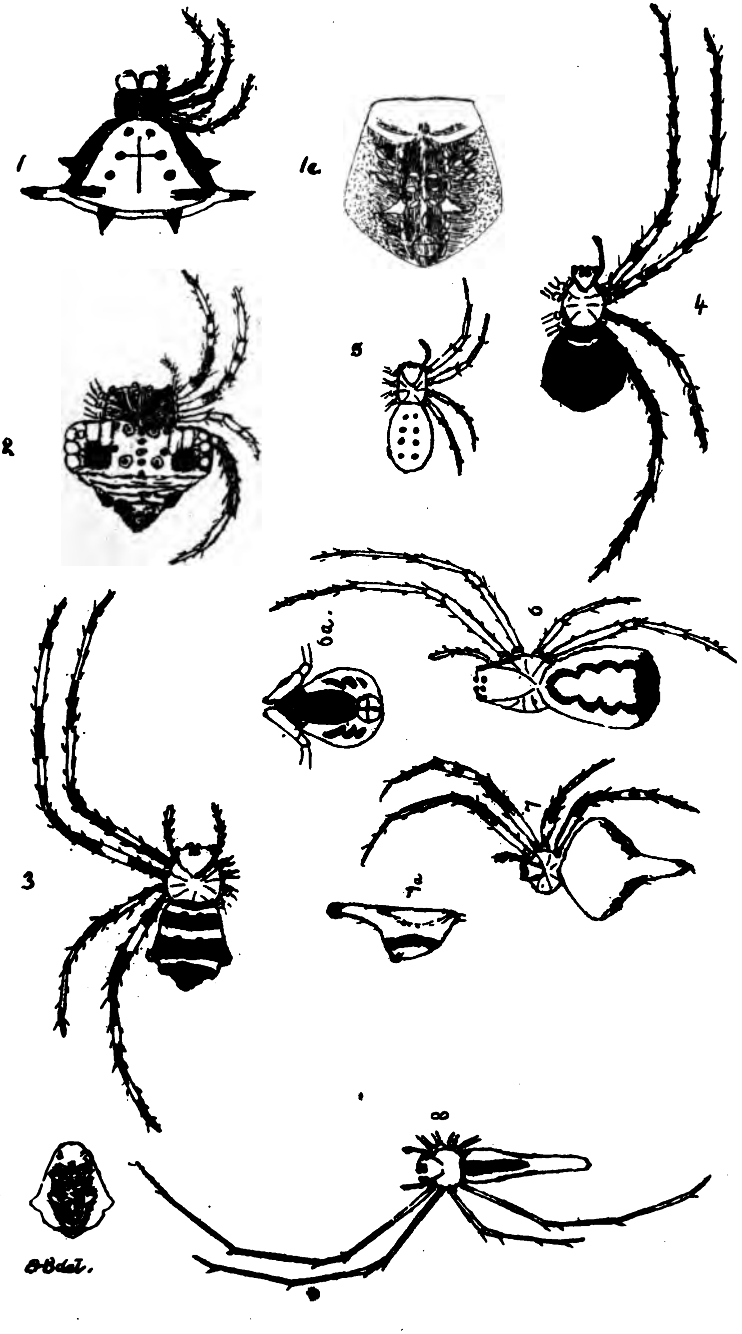
The Honorary Treasurer, Mr. H. H. B. Bradley, read a report on the financial condition of the Society, showing that the gross receipts for 1876 amounted to £120 6s., which, together with previous balances, gave a total of £221 10s. The payments for 1876 amounted to £125 10s., leaving a balance on 31st December of £95 11s. 10d. Including the subscriptions payable on 1st January, 1877, there were due for subscriptions, sales of copies of Transactions, &c., £262 1s. There were no outstanding liabilities, and the roll of members numbered 130.

The following were elected office-bearers and members of Council for the year 1877 :—

W. J. Stephens, M.A., President.
Sir William Macarthur, Vice-President.
J. Stackhouse, R.N., Honorary Secretary.
H. H. B. Bradley, Honorary Treasurer.

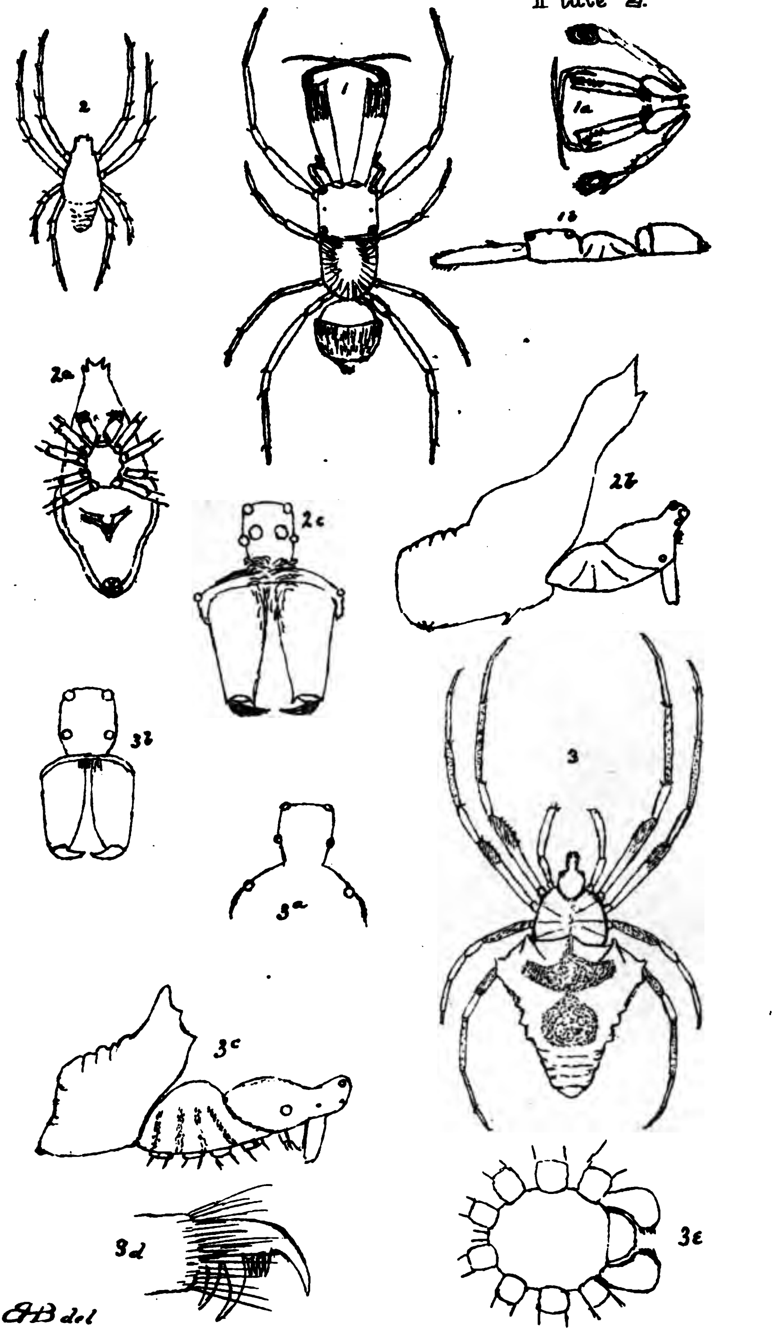
Council: H. G. Alleyne, M.D.; P. Mackay, William Macleay, F.L.S.; E. P. Ramsay, F.L.S.; C. S. Wilkinson, F.G.S., Government Geologist; and R. D. Ward, M.A.

Honorary Members: Baron Ferdinand Von Mueller, C.M.G., M. and Ph. D., F.RS., &c., and Count Castlenau, Consul-General of France in Melbourne, were elected the first honorary members of the Society.



1 *Gasteracantha crucigera.* 2 *Tholia Macleayi.* 3 *Argiope variabilis.* 3a *Argiope, underside.* 4 *A. lunata.* 4a *A. lunata, underside.* 5 *Epeira Macleayi.* 6 *E Mastersii.* 6a *E Mastersii, underside.* 7 and 7a *E. caudata.* 8 *Meta streatipes.*

# Plate 2.



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1 Salticus macleayanus. 1a mouth. 1b. profile without legs.
2 Gerrosoma papuense. 2a underside. 2b profile without legs.
2c head from in front. 3 Rhyncharachne dromedaria. 3a head
from above. 3b from in front. 3c profile without legs. 3d claw
of first legs. 3e sternum and mouth

Plate III.

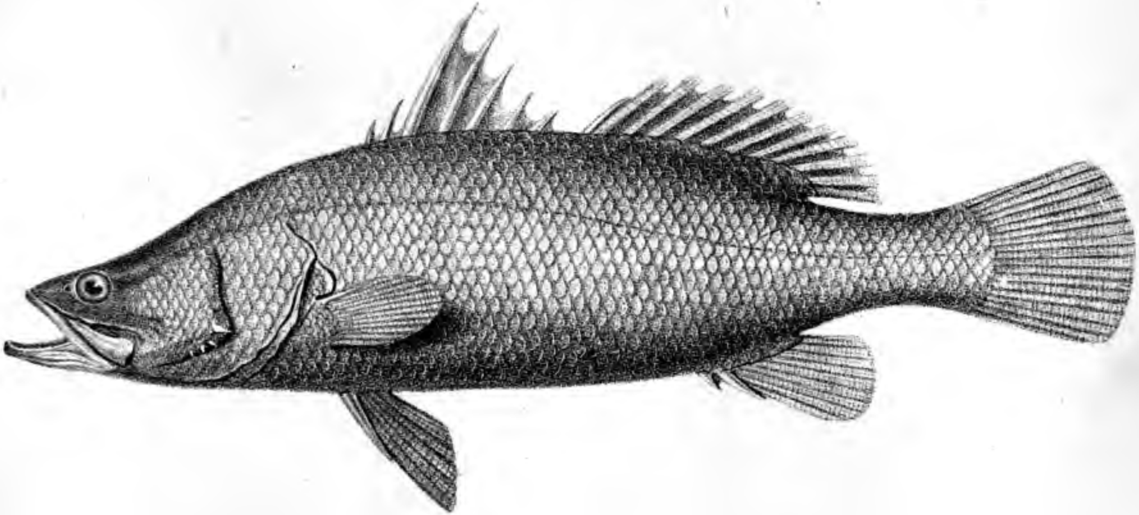

Plate IV

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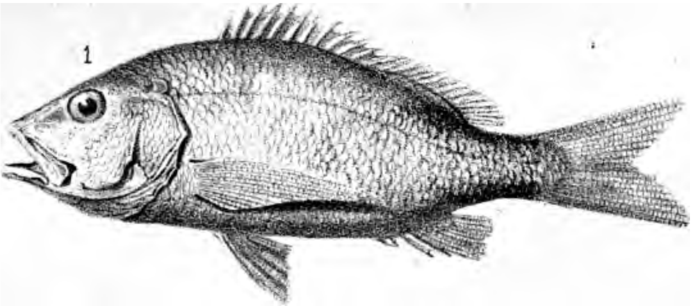

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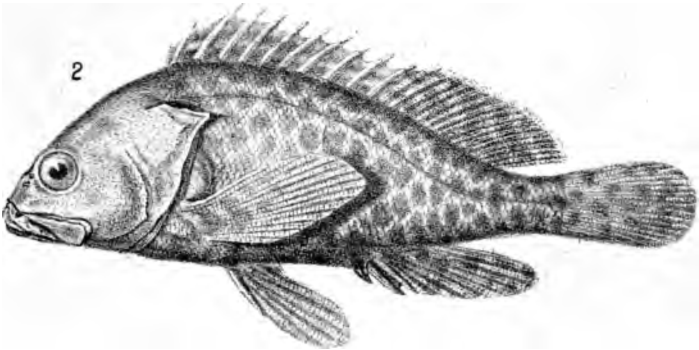

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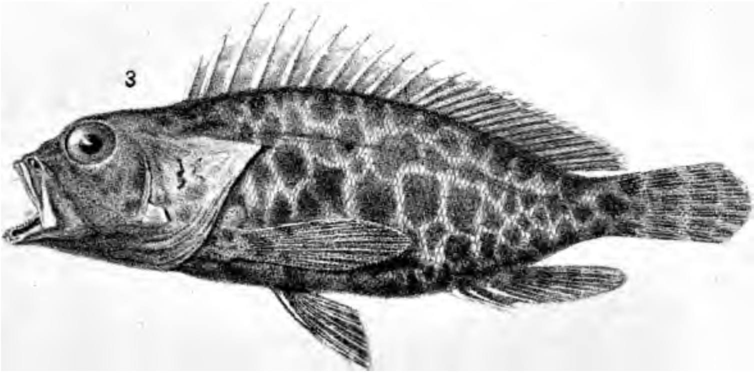

## Plate V.

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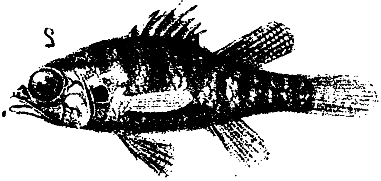

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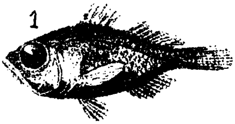

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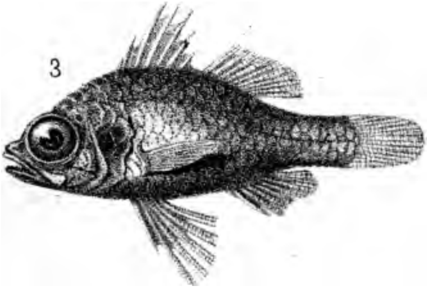

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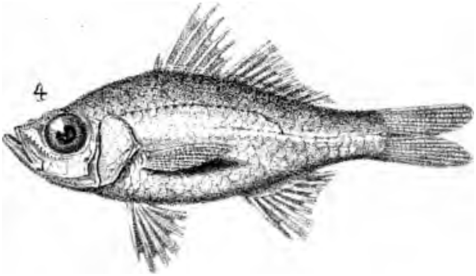

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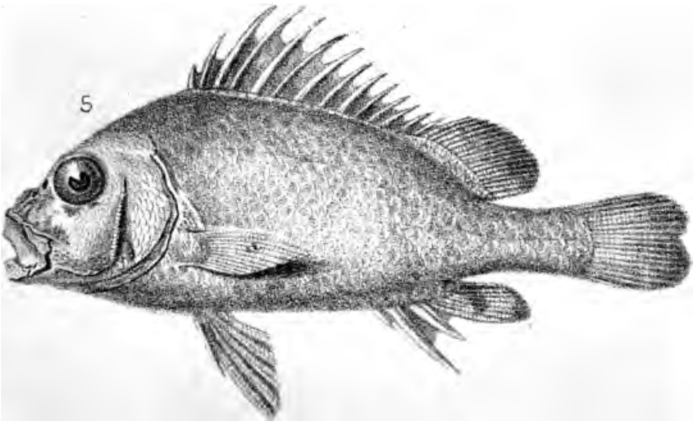

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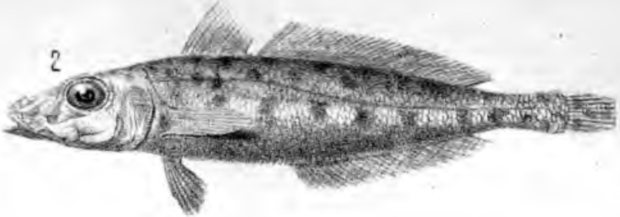

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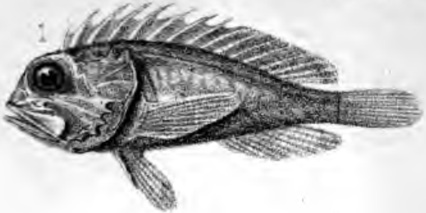

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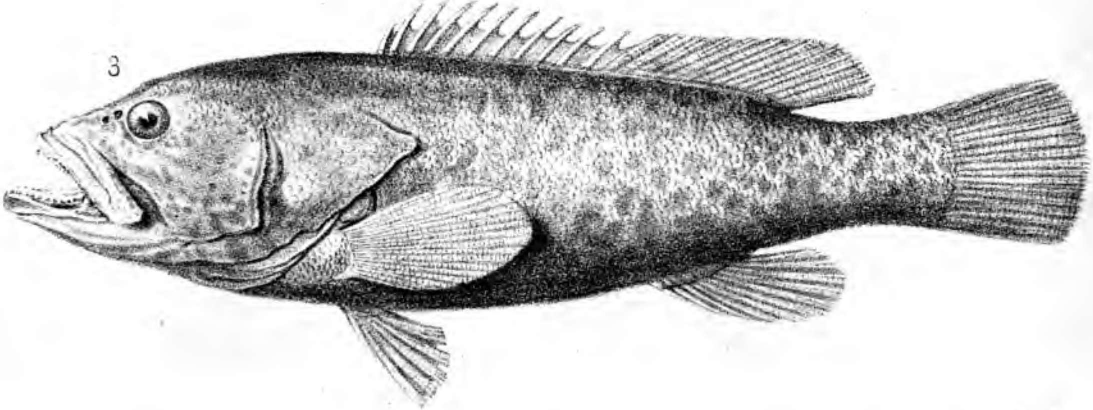

Plate VIII

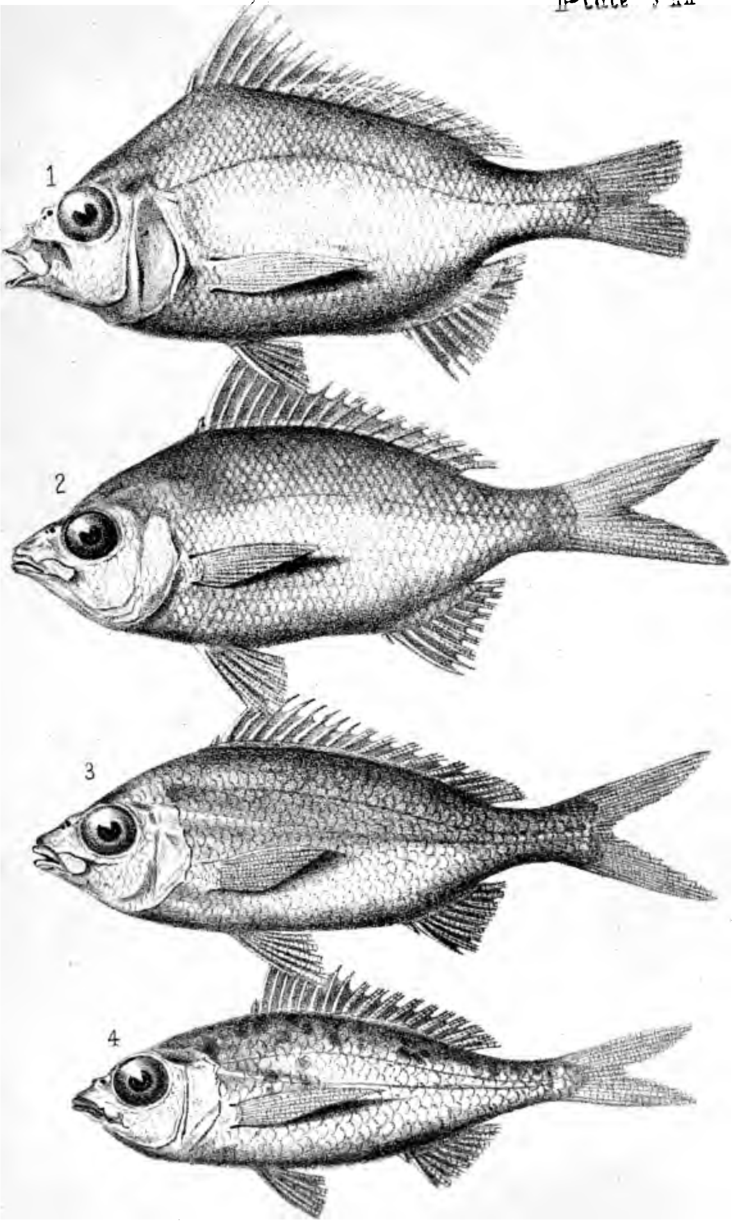

Plate VIIII

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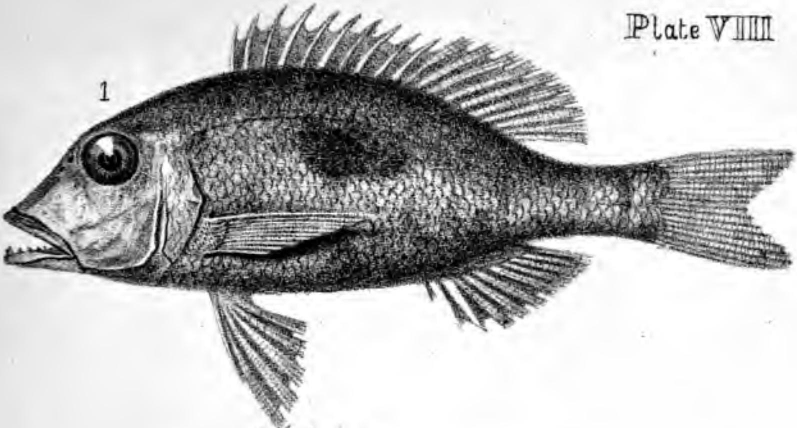

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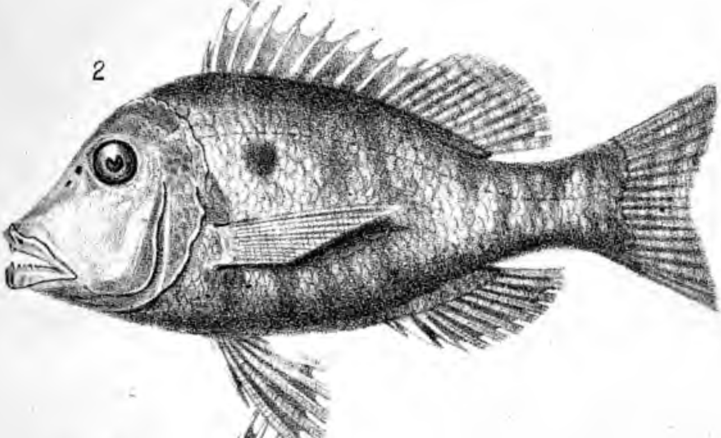

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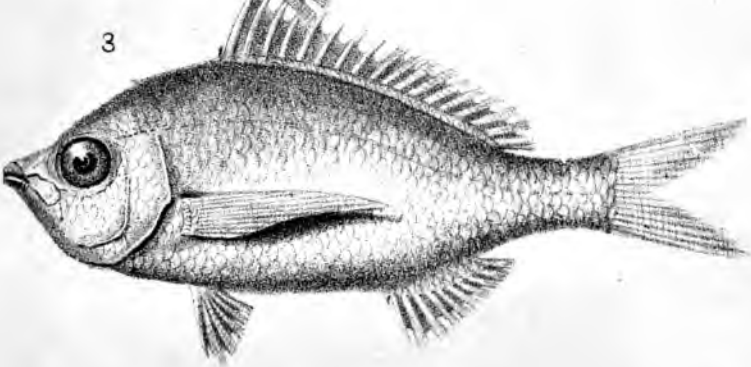

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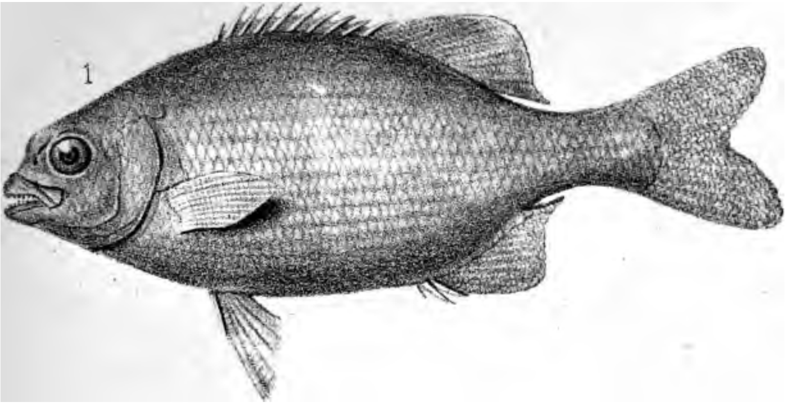

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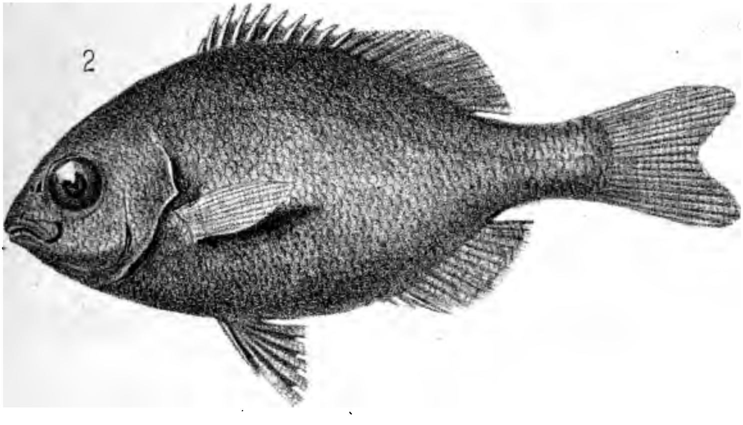

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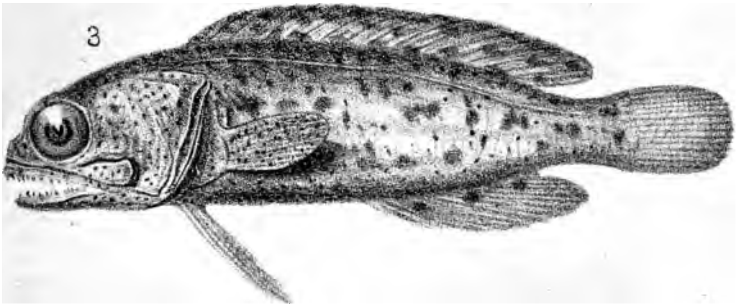

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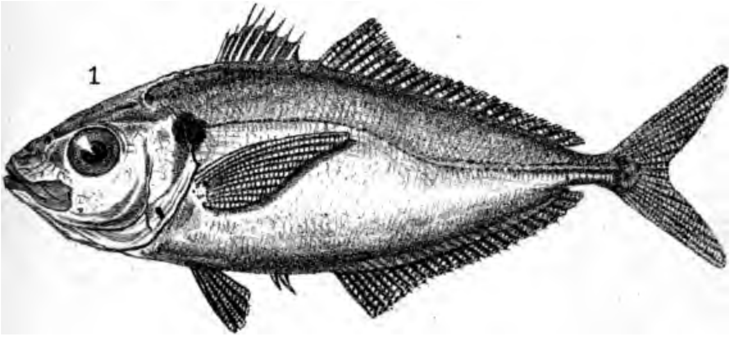

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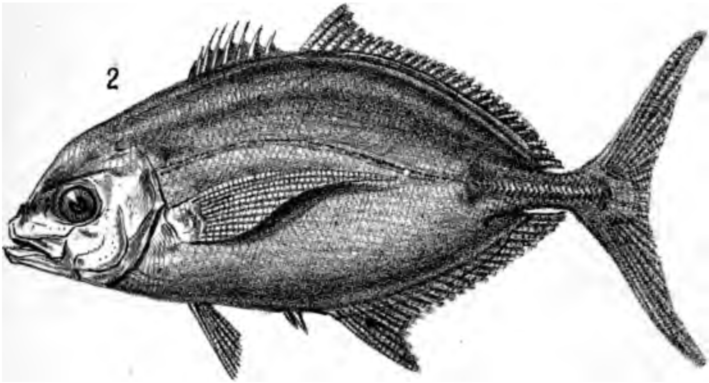

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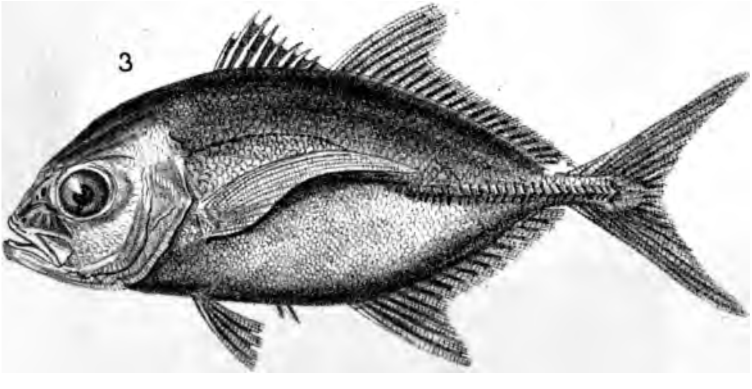

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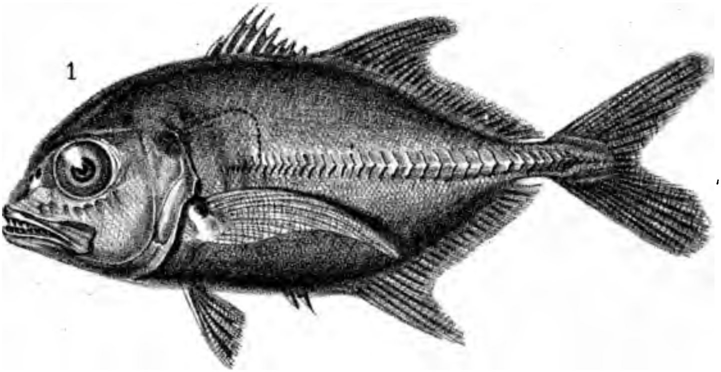

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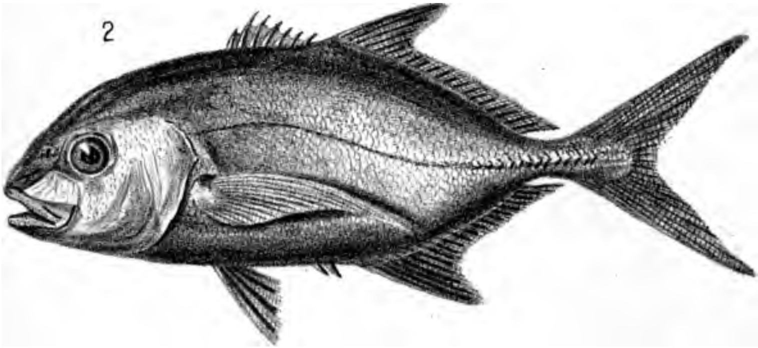

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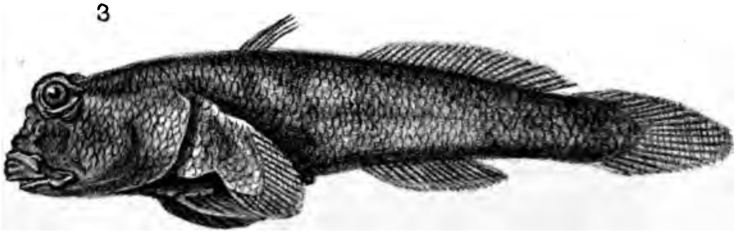

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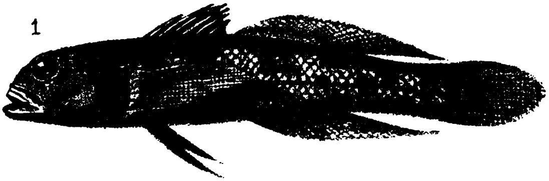

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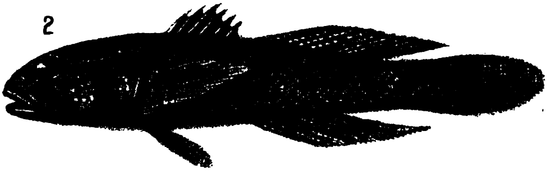

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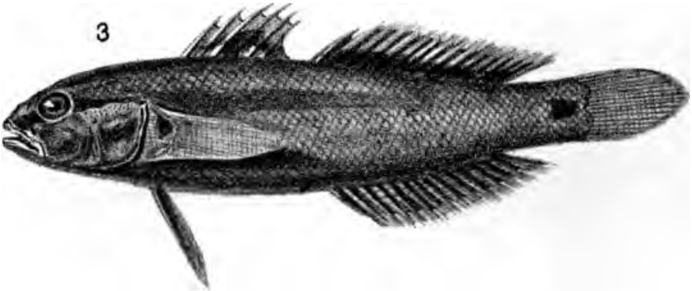

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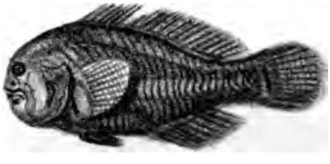

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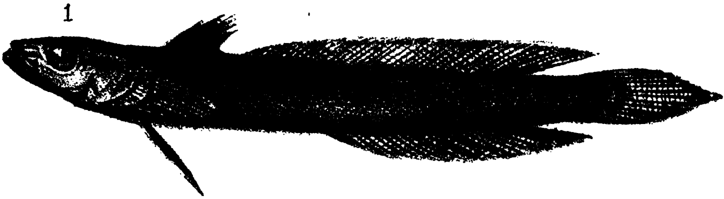

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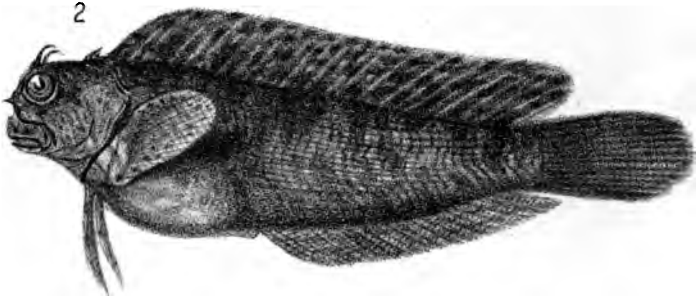

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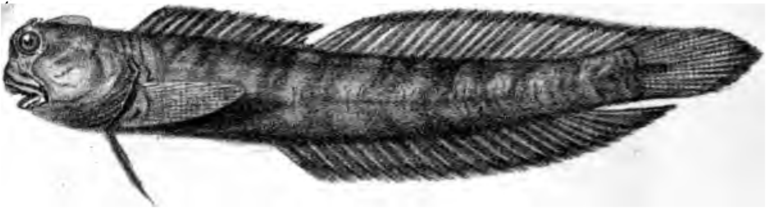

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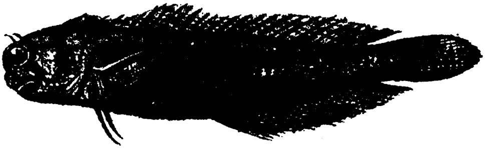

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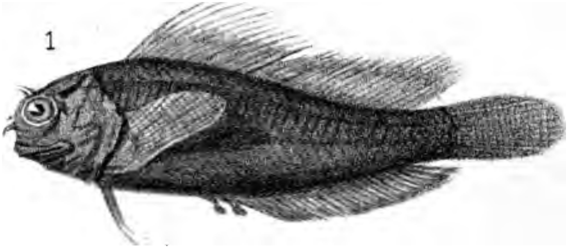

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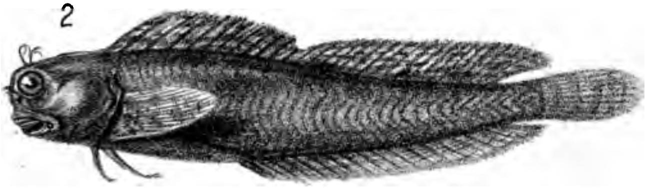

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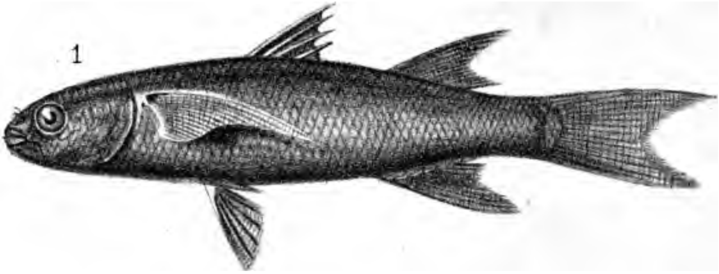

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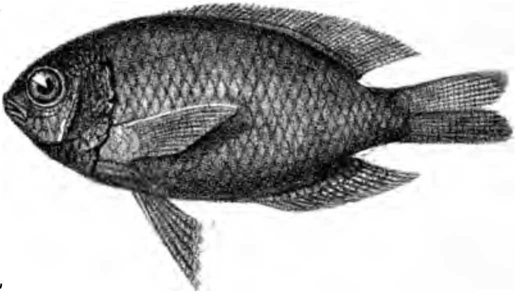

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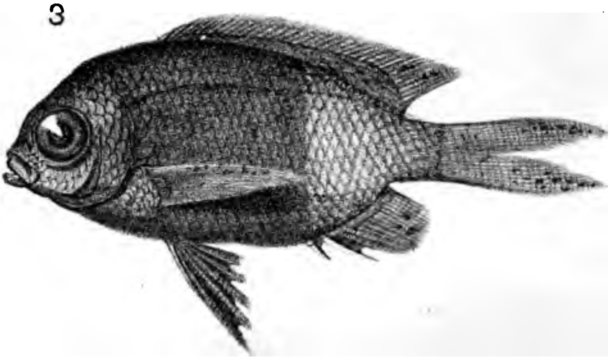

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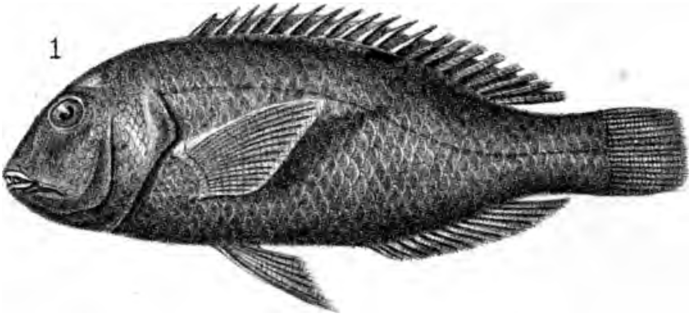

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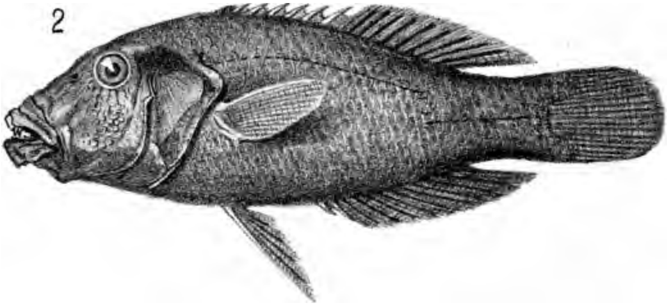

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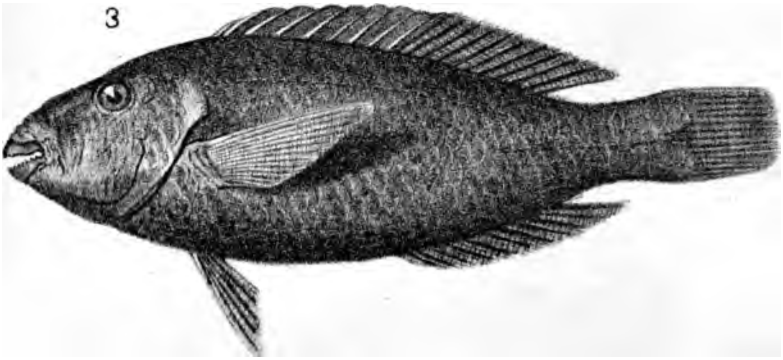

Plate XVII.

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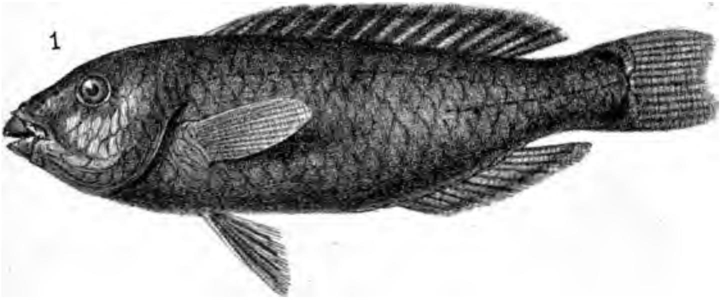

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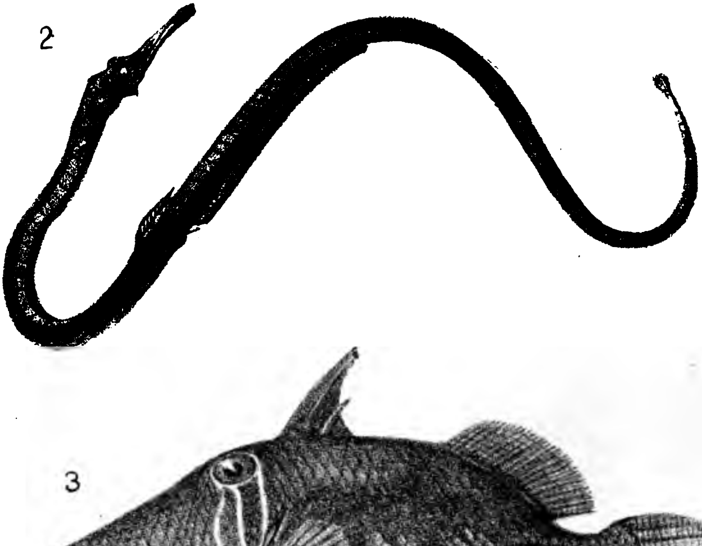

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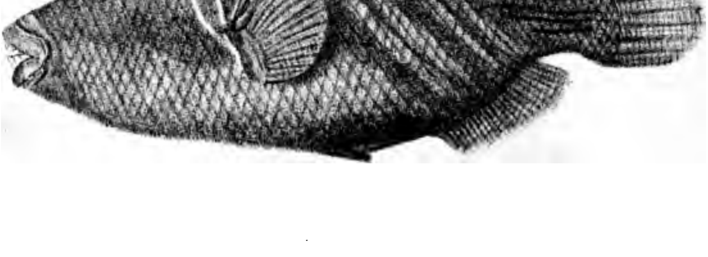

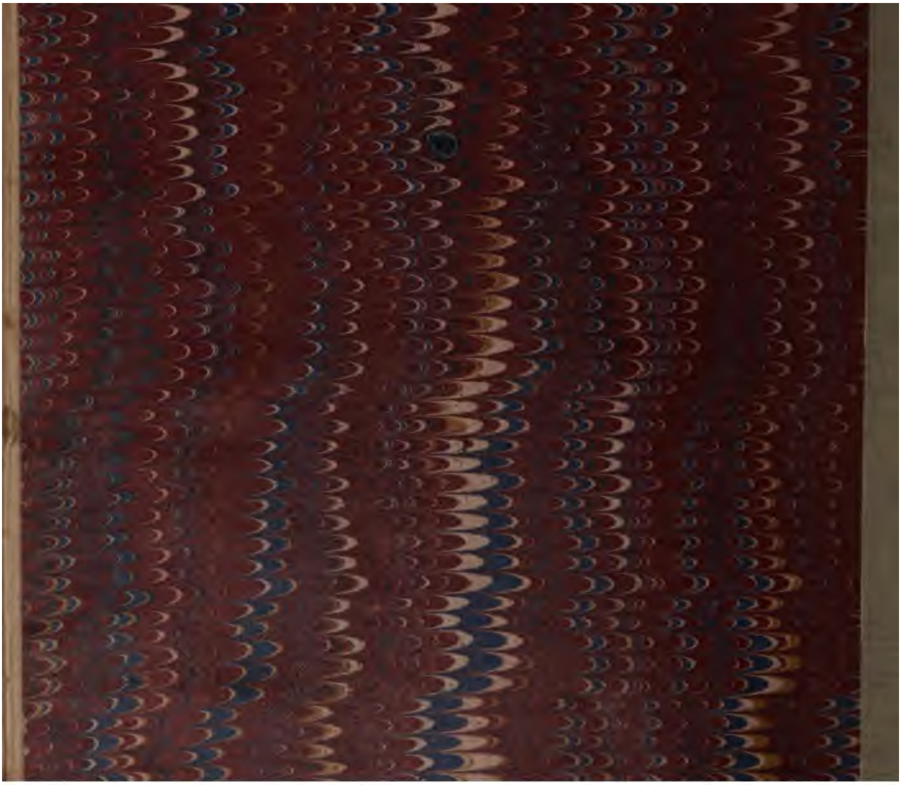

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